THE
ECONOMIC HISTORY OF INDIA

VOLUME I

(From the earliest times to the formation of feudalism).

DR. S. A. Q. HUSAINI, M. A., Ph. D.,
Lecturer, Calcutta University.

EASTERN PUBLISHERS
8-C, RAMANATH MAZUMDER STREET
CALCUTTA-9.

S. A. Q. HUSAINI, CALCUTTA.

Published by JATINDRA NATH RAY, FOR EASTERN PUBLISHERS,
8-C, RAMANATH MAZUMDER STREET, CALCUTTA-9.

Printed by ABANI KUMAR DAS, AT LAKSHMI SREE MUDRAN SILPA,
45, AMHERST STREET, CALCUTTA-9.

TO

MY CHILDREN,

ZUBAIDAH, HANĪFAH, 'ALĪ MURTAZA & ISHĀQ

PREFACE

This work was undertaken with a belief that economic progress followed an almost similar course in most parts of the world and in the hope that it would be possible to trace a like path in this great subcontinent too. Out of the infinitely complex mass of events and circumstances that constitute the past a particular thread of economic import and consequence had to be spun with selected data to prove certain apparent hypotheses. The field of choosing was limited by the extent and nature of the archæological exhibits, primitive human survivals, vestiges of savage and barbaric crafts and institutions and records of historical times that have come down to us from the remote past and the subsequent periods.

To give some glimpse into the Indian economic conditions prevailing during the period of savagery, to trace in an outline the origin of the primitive commune and its decay followed by the rise and consolidation of private property and the institution of slavery through violent struggle between the opposing classes, to notice the emergence of the state (to moderate the class conflict) as well as the advent of the empire, finally, to follow, step by step, the evolution of feudal formation, and in addition, to give under each chapter all available details about the economic life and activities of the people of a particular economic stage, was a task which, at times, appeared to be beyond the capacity of a university teacher who could command only scraps of time rescued from the calls of the teaching profession and the domestic duties of a poor man. It is a matter of immense relief that the work undertaken has been completed.

An attempt to describe the conditions prevailing in India as a whole, period by period, is made difficult by the lack of material and the refusal of different areas of the vast country to fit into a single pattern at a given time ; still, in spite of variety, continual flux and uneven development (when viewed piecemeal), certain broad and general stages such as the emergence of private property along with slavery and the formation of feudalism were reached almost simultaneously not only throughout the advanced areas of this country but all over the civilized parts of the world.

Private property appeared in the Indus valley, the Nile valley and the area enclosed by the Euphrates and the Tigris in 3000 to 2000 B. C. Consolidated private property got the blessing and support of great religions in all the four great river regions of the Old World about the 5th century B. C., and feudal economy became a general feature in Europe, North Africa, India and many other regions of the world about the 10th century of the Christian era.

The discovery, that the course of economic development in India, a country whose peculiarities and specialities writers have never been tired of emphasizing, and bards of singing, has been identical and its different stages have synchronised with similar stages in other civilized countries of the world, and the satisfaction consequent on that discovery are the great reward for the author's labour.

I am indebted to a large number of scholars but for whose earlier efforts I could not have completed this work. All passages and data borrowed from them have been acknowledged as far as possible. I must thank the Librarian of the Calcutta University Library, Mr P. C. Bose, and his assistants for the help rendered to me. My special thanks are due to Professor Adhir Chakravarty of the Sanskrit College, Calcutta, without whose kind help many errors could have escaped my attention.

86, QAZI MAHALLA,
Madurai, South India,
September, 1962.

S. A. Q. Husaini.

CHAPTER I

Stages in Primitive Indian Economy

First Stage (c. 1,000,000 to 600,000 years ago)—Man has been evolving during the past thirty million years—Sivapithecus (of Sivalik Hills) had short canines and rudimentary chin—Infancy of the human race—Partial dwelling in trees—Man ate animals of land and water, fruits gathered, and roots dug out with a stick—Tools mostly selected from the natural find—The formation of articulate speech was the main achievement of man.

Second Stage (c. 600,000 to 35,000 years ago)—Discovery of fire—Hand-axes from Vada Madurai and hand-axes as well as other tools from Soan as old as 400,000 years—During the struggle for existence, essential changes took place in the structure of the human body—An early fire-place found in the Billa Surgam cave—Hunting with spear-like poles—Hunting scenes from Mahādeo Hills—Rudimentary handicrafts—Palæolithic culture an inter-continental one—Same level of development in Asia, Africa and Europe.

Third Stage (c. 35,000 to 8,000 years ago)—Invention of the bow and arrow—Wild game a regular item of food and hunting one of the normal occupations—Beginning of temporary settlement in villages—The dog was domesticated and used in hunting—Dogs' bones found with those of big games—Skins treated and used as clothing material—Rudimentary carpentry and tailoring—Mat and basket-making. Dug out canoes—plaited nets, and hooks made of bone—A large number of microlithic implements of this period discovered.

Fourth Stage (since c. 8,000 years ago)—Pot-making—Firing pots—Pots were made with hand during the early period—Earliest available Indian soft pottery dates back to 5,400 B. C. and painted wares to between 5,000 and 4,000 B. C.—The *potter's wheel* was used in India some 4,000 years ago—Up to this stage economic development was fairly uniform—Geometric microliths—Neater hand-axes—Techniques of carpentry—Exchange within the tribe alone possible—Society gentile—No rulers and ruled—No class antagonism—No private property—The producers owned what they produced—"Here and here only we find earned property." (Engels).

Fifth Stage—Domestication of animals—Rich nutriment in milk and meat. Hunting, once a necessity, now becomes a luxury—The woman lost her former position—Wealth increased—Exchange became possible—Herds and flocks originally belonged to the gens—Gradually they passed into the possession of individuals—Agriculture—Rice cultivated in India very early—Rice belt discovered by George Watt—According to N.S. Vavilov, India is the native home of rice—From there it went to China by way of the Yangtze—Wheat came from Persia and Mesopotamia—Early agricultural communities of Western India (Baluchistān, Makrān, Sind)—Kulli-Mehi communities possible through agriculture—House building—Stone and sun-backed bricks were used—Pottery—Metallurgy—Other arts—Conclusion ... ... pp. 1—22.

CHAPTER II

The Origins of Private Property and the Emergence of Slavery

(Chalcolithic Age)

No possibility of private property before the domestication of animals—In the early stage of domestication of animals the cattle belonged to the gens and the chief of the gens was in charge of them—From domestication of animals to agriculture (to provide food for cattle) was a short step—Similarly, the road from custodianship-to ownership of cattle wealth by the chiefs was not long—Cattle might have become mine and thine even before the Indus valley civilization—Practice of agriculture could have given some form of continued tenure or rights over the cultivated fields—A few slaves could have been owned by the gens soon after the domestication of animals and the introduction of agriculture—We get definite archæological evidence of the high and low, the rich and poor, and the exploiters and exploited at the sites of the Indus valley civilization—We can infer the existence of private property from features of the architectural remains, viz., doors placed in narrow by-ways to conceal the wealth of the house behind blank walls, rooms for watchmen, remains of valuable merchandise, big houses in the midst of small ones, no party-walls, one very big house with a spacious double staircase—Several other pieces of evidence of private property and disparity in wealth.

Evidence of slave labour—Agriculture—Animal wealth—Architecture and masonry—Pottery—Stone articles—Seals—Metallurgy—Metal utensils—Copper and bronze tools—Works of art in bronze—Shell-ladles—Weapons of metals and stone—Wood work—Weaving—Commerce—Weights and measures—Transport—Conclusion : In certain respects the Indus civilization was in advance of that of other countries—In many respects comparable to that of Egypt or Sumer—Still in the final stage of barbarism—Civilization chalcolithic in character... pp. 23—45.

CHAPTER III

The Vedic Setback (c. 1500—700 B. C.)

Harappan civilization destroyed by the Āryans about 1,500 B.C. The basic economic stage of both the Harappans and the Āryans was the same, but the Āryans occupied a lower position—The Āryans did not destory the Indus culture completely—There were survivals—Out of the two civilizations a new synthesis was born—The Āryans perhaps did not have private property in lands, yet their culture cannot be considered as that of the primitive communistic stage—The early Āryan society in India was a household or *gana* organisation based on blood and dominated by a patriarch.

Agriculture—Animal wealth—House Building—Pottery—Metallurgy—Copper and bronze articles—Arts and crafts—Trade and commerce—Transport—Slave and wage labour—Division of labour—Money—Cows used as coins in India and the Roman empire—The Greek *stater*, the Persain *daric* and the Indian *suvarna* were the value of a full grown cow in gold calculated by weight—Precious metals by weight were used as currency—First mint established in Lydia (c. 800 B. C.)—Independent Chinese currency about the same time.

Conclusion—The Āryans brought a *gana* society which gradually broke up and gave way to a primitive capitalist society with its necessary concomitant of class antagonism—The process was painful and bloody—The classes had to be controlled to smoothen the process of exploitation—This brought about the armed state—Wars for plunder became a regular industry—The new production-relation brought about a tremendous economic development—Vast tracts of land were brought under cultivation—A summary of achievements up to the emergence of private property and the state .... pp. 46—68.

CHAPTER IV

Emergence of Private Property and the King—*Iron Age.*

1,000—500 B. C.

According to N.S. Vavilov rice cultivation began in India—The principal river basins attained the Bronze Age culture about 3,000—2,000 B. C. Wheat and barley were imported from the West. The Vedic setback helped the areas lagging behind to catch up with the advanced North-West—Economic advance not uniform but zig-zag and wave-like ; still we observe a remarkable uniformity at significant stages—Bhīshma attributes the fall of the *gana* society to greed and desires which gave rise to anger, passion and hatred—With the appearance of a propertied class, a fresh set of production-relations emerged and with them antagonisms not previously known—To moderate the class struggle the state with coersive arms was born.

The development of the forces of production, and the consequent division of labour, led to production for exchange and exchange in its turn broke down the old way of appropriation—Private production and private appropriation meant private property—Exchange created money (at first in the form of cows) and money facilitated accumulation. With the emergence of private property very cruel laws to protect it also came into existence—rules for inheritance were laid down and iniquitous criminal regulations framed.

Agriculture—A large number of seeds mentioned in the literature of the period—The seasons of the different grains—People most of whom were agriculturists lived in villages—Cattle—House Building—Pottery—Metallurgy—A brief history of smelting iron—The use of iron becomes common especially in the South and North-West—No iron finds from the areas occupied by the Āryans which can be dated earlier than 500 B. C. Crucible steel from Tamil Nād—Arts and crafts—Money-lending—Commerce—Coinage—Transport—Taxes—Conclusion... ... ... pp. 69—90.

CHAPTER V

Consolidation of Private Property and the Rise of Empires

(500 B.C. to 200 A.D.)

Consolidation of private property and a social and moral structure based on the new property-relations appeared simultaneously and independently about the 6th century B. C. in the river basins of the

Nile, the Euphrates, the Ganges and the Yellow River proving the uniformity of the pace of human progress in different parts of the globe—Private property firmly established—War between the exploiters and the exploited including husband and wife—Some of the teachings of the Buddha safeguard property-rights—mass of laws regulating property-relations in the *Manu Dharma Sāstra*, the *Jātakas*, the *Arthasāstra* and the *Sangam* literature.

One of the main features of the new equilibrium was the ascendancy of the warrior class—Brāhmanas permitted to become gentlemen farmers and sleeping partners in mercantile or banking firms managed by Vaisyas—Shameless exploitation by the warrior class, an open exaction at the point of the sword of the product of the labour of more humble and weak men—Tribute in various forms by every villager—Grants of villages to nobles, priests and princes of the royal blood—Huge estates of 1,000 karīsas and more, some requiring as many as 500 ploughs and a host of labourers—Anāthapindika's wealth was valued at 800,000,000 gold pieces—Among the Tamils lands were getting accumulated in the hands of the *Vellālars* (Lords of Irrigation) to which class the Pāndya, Chola and Chera rulers belonged—While this great accumulation was taking place on the one hand, on the other, freemen were being reduced to wage slavery which was worse than slavery pure and simple—The same phenomenon we see throughout the country—Just as the appearance of private property coincided with the rise of kingdoms, the carving out of big estates by a few individuals out of the small private holdings seems to have suggested or coincided with the birth of empires—Alexander's invasion unified Northern India and paved the way for Chandragupta—Then followed other empires.

Slavery—Agriculture—Pastures—Forestry—Animal Husbandry—House Building—Pottery—Stone work—Metal work—Cloth manufacture—Other arts and crafts—Wages and prices—Guilds—Inland trade—Trade routes—Markets—Weights and measures—Foreign trade—Money-lending—Coinage : *suvarna*, *dharana*, *kāmsa*, *pāda*, *māsaka*, *kākanika*—punch-marked coins—Transport on land and water.

Revenue—Land belonged to the king—The king's share of the produce—Sulka—Miscellaneous taxes—*Bali*, a religious tax—Forced labour—In Tamil Nād land-tax, customs and tolls formed the chief sources of revenue—Mauryan taxes were crushing, merciless and unscrupulous—Exemption from taxes granted to Brāhmanas, princes, officers of the state and institutions, religious as well as charitable—Temporary exemption—Expenditure—Conclusion. ... ... pp. 91—151.

CHAPTER VI

The Growth of Feudal Elements

By the end of the 5th century the principal elements of feudalism get established and many of the characteristics of the feudal society become apparent. King owner of all lands—Kautilya's enunciation—Megasthenes' testimony—a text quoted by Bhattaswāmi—Maitland's opinion—The ultimate ownership vested in the king because the final argument of the stick rested with him—The royal demesne cultivated under the supervision of the Royal Steward—It consisted of cultivated lands, extensive forests, etc.,—Grants to the Brāhmanas—Enunciatons by Yājnavalkya and Kautilya—grants by Bimbisāra and the Kosala king—A large number of grants to the Brāhmanas by the Gupta rulers—the text of a typical grant (Fleet, Vol. III, pp. 241 seqq.) Donations of villages by kings to members of royal families, the officials of the state, guilds and private individuals for religious merit—Hundreds of villages granted to the Nālanda Vihāra—Charitable grants—Grants to royal princes—Grants to civilian officers—Military fiefs—Subinfeudation—Economic immunities granted to the superior classes—Commendation—Oppressive Taxes—Deliberate oppression recommended by certain theorists—Forced labour—Slavery—Condition of labourers—Agriculture—Forestry—House building—Stone work — Pottery — Metal works—Other arts and crafts—Guilds—Inland trade—The market—Foreign trade—Coinage—Conclusion ... ... pp. 152—193.

CHAPTER VII

Accomplishment of Feudal Formation

Complete formation of the feudal system (6th to 10 Century A.D) —Inscriptions making feudal grants found all over India—Hence the process was completed on a wide scale—Grants to priests and temples—For charity—To Princes—To military chiefs. Defeated chiefs retained as feudal barons.

The formation of a feudal hierarchy—The *Mahārājadhirāja* (king) —The *sāmantamahārāja* and the *mahāsāmantamahārāja*—The *mahāsāmantādhipati*—The *sāmanta* and the *mahāsāmanta*—Rights and privileges of these barons-in-chief—The *rānaka* and the *gāvunda*—Their status—The *thakkura*, the *rāshtrakūta*, the *nāyaka* and the *bhogika*.

Subinfeudation—Commendation—Serfs—Decline of slavery—Heavy taxation—Paucity of coins—Retrogression of trade—Agriculture—Building—Metallurgy—Jewel-making—Textiles—Other industries—Guilds and associations—Labour regulations—Princes—Wages—Trade and Commerce—Coinage—Copper pieces—Silver currency—Gold coins—Money-lending—Contrast in wealth--Land tenure—Taxes—Conclusion ... ... pp. 194—241

CHAPTER VIII

Conclusion

Man has been using tools at least for the past 600,000 years—Even in remote antiquity man in different parts of the globe displayed an identical genius and similar skill—This remarkable uniformity did not get disturbed at any later stage—Difference and unevenness appear when small areas or small spans of time are subjected to a close observation—Halting at significant stages, we find that the progress is almost even. Palæolithic industry was inter-continental and so also many types of pottery—Domestication of animals and agriculture sprang up almost simultaneously throughout the Old World—India the native home of rice—Wheat came from the West.

The Indus valley civilization was ahead of the entire world in using the saw, the candle-stick and cotton for clothing—In smelting metal, India lagged behind some nations—Though India was late in using iron, the steel from South India won international reputation—We see private property, great religions, and feudalism springing up in several advanced countries almost simultaneously convincing one that human genius is the same everywhere and that it expresses itself at a surprisingly uniform way and pace.... ... ... pp. 242—254

Index ... ... pp. 255—268

LIST OF PLATES

Plate No.		*Page*
I.	Early Hand Axes	3
II.	An 8 or 9-year old Boy of the Palæolithic Age (reconstructed)	5
III.	Hunters with Long Poles and no Bows ...	7
IV.	Polychrome Nal Ware	11
V.	Bronze Mirror from Mehi	20
VI.	Pottery Candle Stand, etc.	34
VII.	Copper and Bronze Articles from the Indus valley	38
VIII.	Boats scratched on materials from Mohenjo-dāro	43
IX.	Early Vedic Pottery	56
X.	Copper and Bronze Articles, Late Vedic Period ...	59
XI.	The Vedic Chariot	62
XII.	The Fort Wall of Ajātasatru	77
XIII.	Iron objects from South India and the Deccan ...	82
XIV.	Interior view of the Chaitya Cave at Kārli ...	96
XV.	Soak-well, Bhīr Mound, Taxila	105
XVI.	Some Iron Tools used in Carpentry	111
XVII.	Capital of Asoka's Column at Sārnāth ...	113
XVIII.	Some of the Jewellery of the Period	118
XIX.	Punch-marked coins from Taxila	138
XX.	Iron Implements of Agriculture	170
XXI.	Glass Ware	186
XXII.	Coins of Bactria and North-Western India ...	188
XXIII.	Some of the Gupta Coins	190
XXIV.	Lakshmana Temple, (brick)	218
XXV.	The Rājarājesvara Temple, Tanjore	226
XXVI.	Some coins af the Early Feudal Period ...	232

CHAPTER I

STAGES IN PRIMITIVE INDIAN ECONOMY

Man has been evolving during the past thirty million years. "By the end of the pleistocene, somewhere between a million and seven hundred thousand years ago, this line of evolution had produced a number of erect two-legged genera and species, including ape-men, half-brained men, men with beetling brows and muscles, and men with brains, heads and faces like those of people living to-day."[1]

The remains of fossil primates, including ape-men, have been found in India, Africa and Europe. Those that have a bearing on the immediate evolution of man go back to several million years ago. In the deposit of Sivalik Hills there have been discovered important remains of fossil apes (*Sivapithecus*) who had canines as short as those of a man and a rudimentary chin. This animal was about the size of a chimpanzee and seems to have occupied a place in the evolution of the stock from which man eventually sprang. Necessity drove the animal man to stand erect on the hind feet, as done by trained monkeys and bears, and free the front feet as hands for defence and gathering food.

We can assume that in the pleistocene, as soon as our ancestors had acquired their special combination of erect posture, slender fingers, short canine teeth, and at least a half-sized brain, they used some kind of sharp tools either of wood or of stone for the simple reason that human beings are not equipped by nature to live without them. Tools are our substitutes for the lion's fangs and claws, the elephant's trunk and the long muscles and special teeth of the grazing animals.

Frederick Engels, on the basis of the studies of Morgan, divided the pre-historic period into six stages of culture—three of savagery and three of barbarism. The first stage covers the infancy of man. The discovery of fire marks the beginning of the second stage and the invention of the bow that of the third. With the manufacture of pottery commences the fourth stage and with the domestication of animals, side by side with agriculture, the fifth. Smelting of metals, especially iron, ushers in the sixth stage.

---

[1] Carlton S. Coon : *The History of Man*

The First Stage (c. 1,000,000 to 600,000 years ago)

During the first stage, the infancy of the human race, man still lived in his original habitat (tropical or sub-tropical forests) dwelling, at least partially, in trees to save himself from the large beasts of prey. Grass, palm leaves and such other materials were used for walling and roofing. Vines and other creepers served as ready-made ropes. Twisting thin ones together for greater strength set man on the road to rope-making. Even in this very first stage man appears to have discovered adhesives, glues and cements of various sorts. Fallen or felled tree-trunks or branches were used for floating on water with the help of long poles. Fruits, nuts and roots served as food. He also ate such animals of land and water, as he could catch with his hands, by laying simple traps and snares, or hunt by throwing stones or other missiles.

The weapons and tools used were not generally shaped by man's hand, but mostly selected from the natural find. The first tool used by man was probably a pointed stick. With it, he could, not only dig out roots and burrowing animals, but he could also brain a tortoise, pry open its shell, and kill a snake, rat, or other small and relatively slow-moving animals. In the simplest existing societies this is exactly what women still do with sticks. In the earliest stage, without reasonable doubt, collecting slow-game, as such animals are collectively called, was part of man's general daily routine of food-gathering which included root-digging and fruit-gathering. To fell and sharpen a sapling requires a tool with some kind of edge. This tool can be a broken pebble, a piece of fossil wood, which naturally breaks up into rectangular pieces, or, best of all, a piece of broken flint. That man could have used unshaped flints for his cutting tools is an established fact. Members of a tribe in east-central Australia do exactly that thing to-day. "With unworked flints these living fossils of mankind make digging sticks, spears, and bark vessels, carved in one piece, from a kettle-shaped section of tree-trunk. There is no logical reason why wood working of this degree of simplicity may not hark back to nearly the very beginning of man's life on the ground."[1]

The first stage in India covered the period from about 1,000,000 to 600,000 years ago. The formation of articulate speech was the main achievement of man during this period.

The Second Stage (c. 600,000 to 35,000 years ago)

The second stage begins with the discovery of fire and the emergence of man as a tool-making animal. The archæological record of

---

[1] C. S. Coon, p. 45.

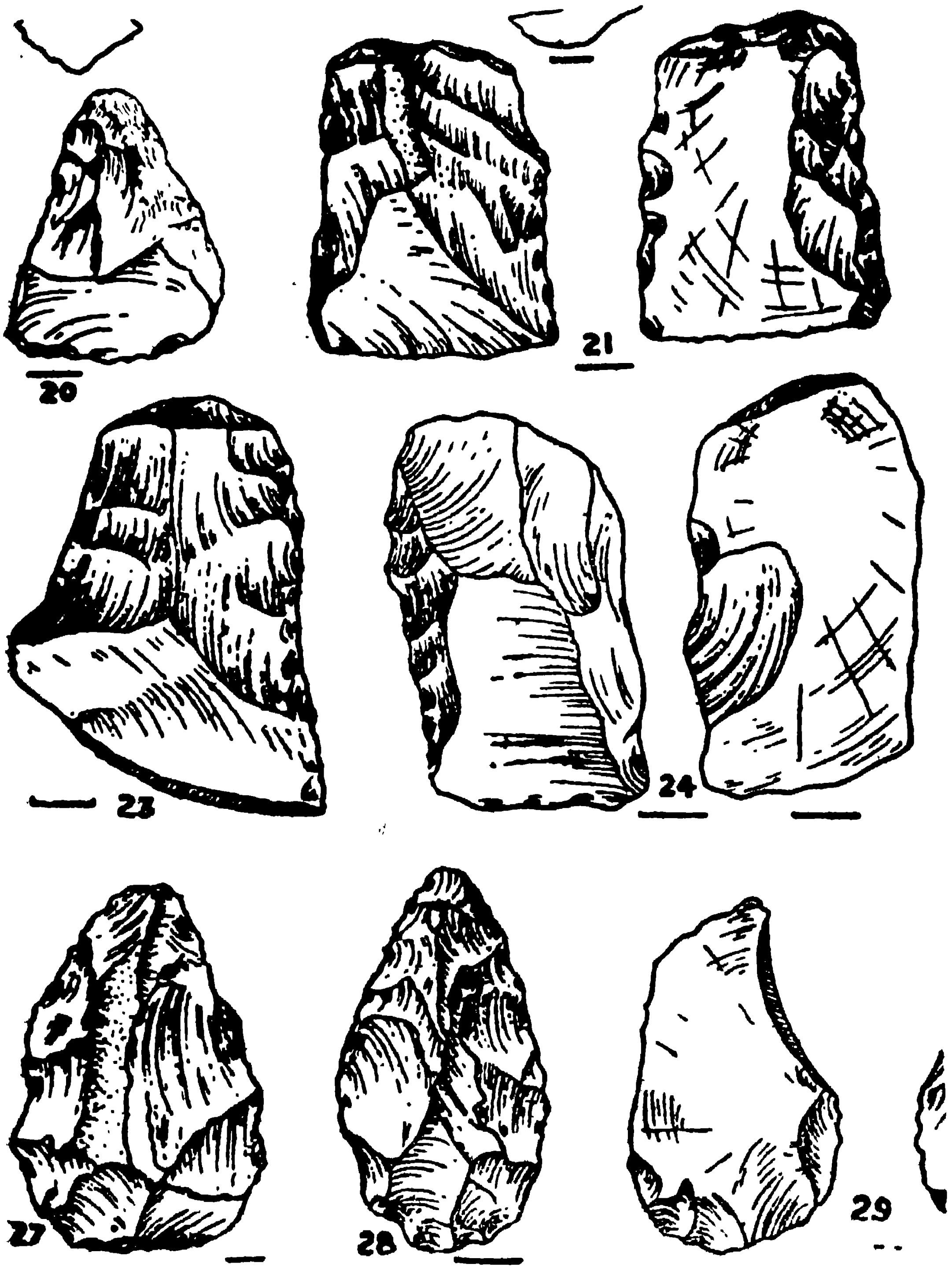

Fig. 9

PLATE I

Early Hand-Axes
before 200,000 years ago
(Subba Rao, pl. 9)

India goes back to a period as early as 600,000 years ago. To this fantastically remote period belong the earliest tools made of chipped stone which prove the existence of man as a tool-using being. From this time onwards stone tools and fossils carry on the story of man's productive activity across the millennia. For more than half a million years the man of this sub-continent has broken up millions of nodules of flint in an effort to produce tools, and since flint is imperishable, a large number of the implements have been recovered by archæologists. The rough hand-axes at the lowest stratum of the Vadamadurai (a suburb of Madura) site belong to this stage. To this period belong also the early types of stone tools unearthed from the Soan (about 476,000 years ago),[1] Sabarmati, Mehi, Narmadā, Godāvari and Krishna basins. These crude hand-axes have a deep whitish crest and generally retain a large portion of the pebble surface.[2] Piggott would date the earliest Soan tools about 400,000 to 200,000 years ago[3] and the Madras industry (core tool family) about 400,000 to 100,000 years ago.[4] D. H. Gordon places the pre-Soan artifacts in the shape of pebble tools and coarse Clacton-like flakes of the boulder conglomeration found in the Soan river area in the first part of the Middle Pleistocene Age, about 400,000 to 300,000 years ago.[5] Choppers and hand-axes discovered recently by Prof. N. K. Bose in the Kharagpur Hills in the Monghyr district, Bihār, point to the possibility of a single culture extending form South India to the Gangetic valley even in the Palæolithic Age. The tools found bear a likeness to the Old Stone Age implements found in the neighbourhood of Madras.[6]

During this long period, essential changes took place in the structure of the human body. The ancient ape-men (pithecanthropus) gradually developed into people whose physique was closer to that of the modern man with very powerful hands, rough and clumsy, having broad stump-like fingers and strongly developed muscles which gave them tremendous strength. But the hands were not as flexible and mobile as those of a modern man and could not perform precise labour operations requiring skill and dexterity.[7]

---

[1] See the report by G. N. Das in the Statesman dated 9th August, 1958.

[2] Subba Rao, *The Personality of India*, (Baroda, 1956), p. 25.

[3] Stuart Piggott, *Pre-historic India*, (Harmondsworth, 1950), p. 31.

[4] Ibid., p. 33.

[5] D. H. Gordon, *The Pre-historic Background of Indian Culture* (Bombay, 1958), p. 6.

[6] The Statesman dated 28th June, 1959.

[7] S. Kiselyov, Archæology in the U. S. S. R. (translated by Mongait, Moscow, 1959), p 69.

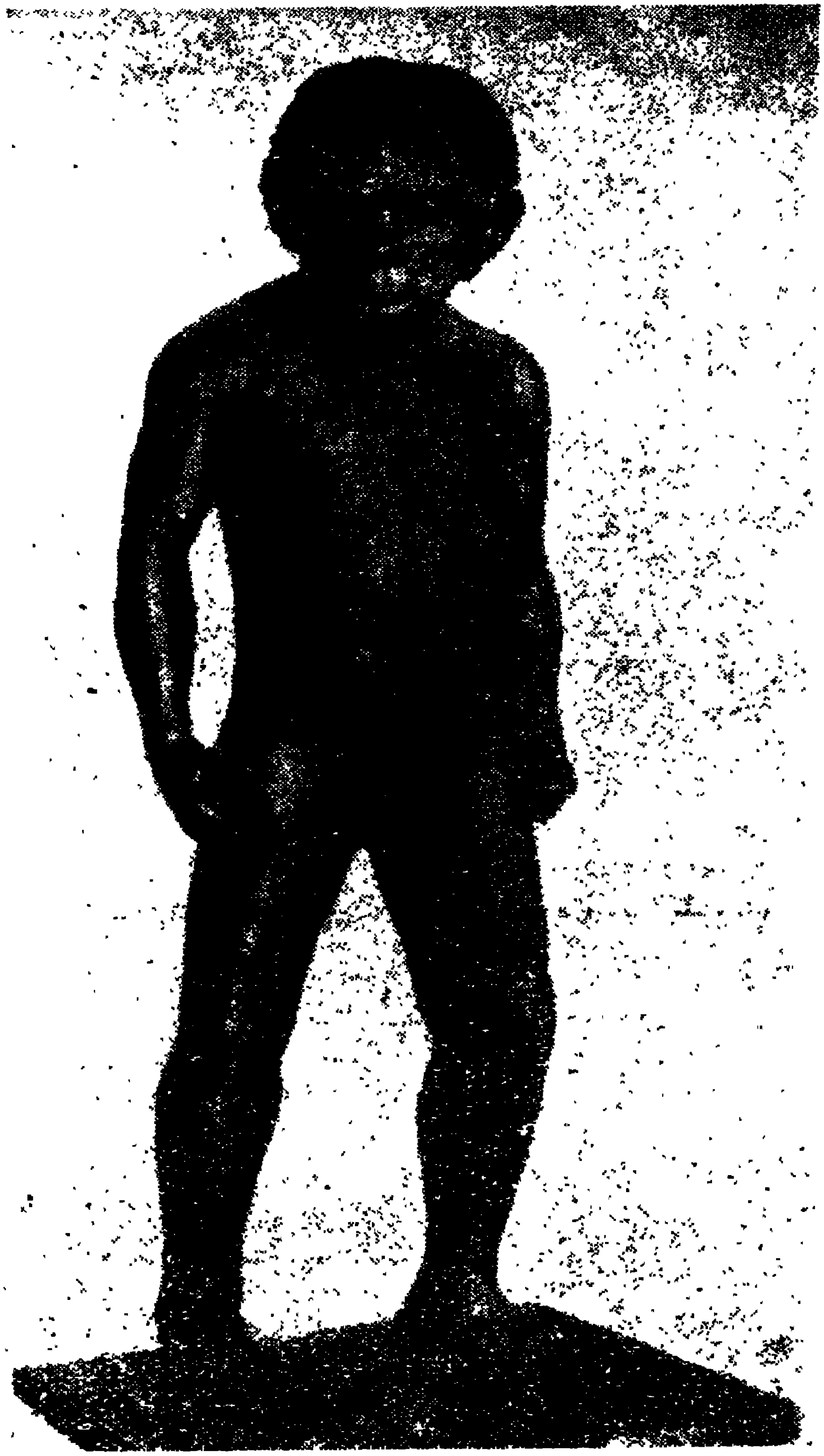

PLATE II
An 8 or 9 year-old boy of the period from Teshik-Tash (South-Uzbekistān). Reconstruction by M. N. Gerasimov p. 73, Archæology in the U. S. S. R.

It was during this stage that fire was discovered. Fire exists in nature. Volcanoes emit it, and in tropical forests fires are started by the friction of branches. Moreover, sparks spring out when one piece of flint strikes against another. These phenomena should have been observed by man in his very infancy. It is probable that a burning piece of wood should have been carried by some clever man and nursed carefully, feeding it with tinders and blowing on it when it faltered. He and his group could have kept it going indefinitely. One family could get it from another, and thus it could spread from camp to camp and even from continent to continent. Making fire at will came very late. This explains the importance attached to maintaining a permanent fire in the savage and barbarian societies.

The first positive evidence of man's use of fire is the presence of hearths in the cave of Chou-kou-tien near Pekin in China. The man who used it belonged to the type known as *Sinanthropus Pekinensis*, a kind of half-brained man whose remains were found there and who flourished about 600,000 years ago. Fire was the first source of power which man found out how to use.

In India an old fireplace with many fragments of charcoal, some of which looked like cowdung ash balls, has been discovered at the depth of eleven to twelve feet in the Billa Surgam cave in the neighbourhood of Benganapalli within the Nandyāl taluq of the district of Kurnool. It has been wrongly dated about Mid-Palæolithic times.[1]

Fire lit on the riverside at night should have made fish jump out of water and suggested the use of fire for catching fish. Moreover, fish, cooked on fire, was rendered more easily digestible. Hence, one of the special features of this stage was the eating of fish on a large scale.

There seems to have been a definite improvement in the technique of hunting. The same digging stick of the first stage, made a little longer and considerably sharper, could be of service as a spear. A man who spends his whole life casting a simple one-piece spear can become almost incredibly skilful and bring down animals weighing up to one hundred pounds and even more. "Men learnt to hunt not only small but big and strong animals. Apparently whole clans took part in beating for game and driving the exhausted animals into bogs, to a precipice and so on."[1] Further, there should have been a marked advance in the manufacture of traps and snares. The earliest hunting scenes painted in the rock shelters of Mahādeo Hills, Singhanpur, and Kabra Pahār do not have any archer depicted. All the hunters have a staff-like spear. Obviously these scenes represent hunting before the bow and the arrow came into existence.

---

[1] Panchānan Mitra, *Pre-historic India*, (University of Calcutta, 1927), pp. 166 seqq. Cowdung balls and Mid-Palæolithic times cannot go together unless the dung is of a wild animal.

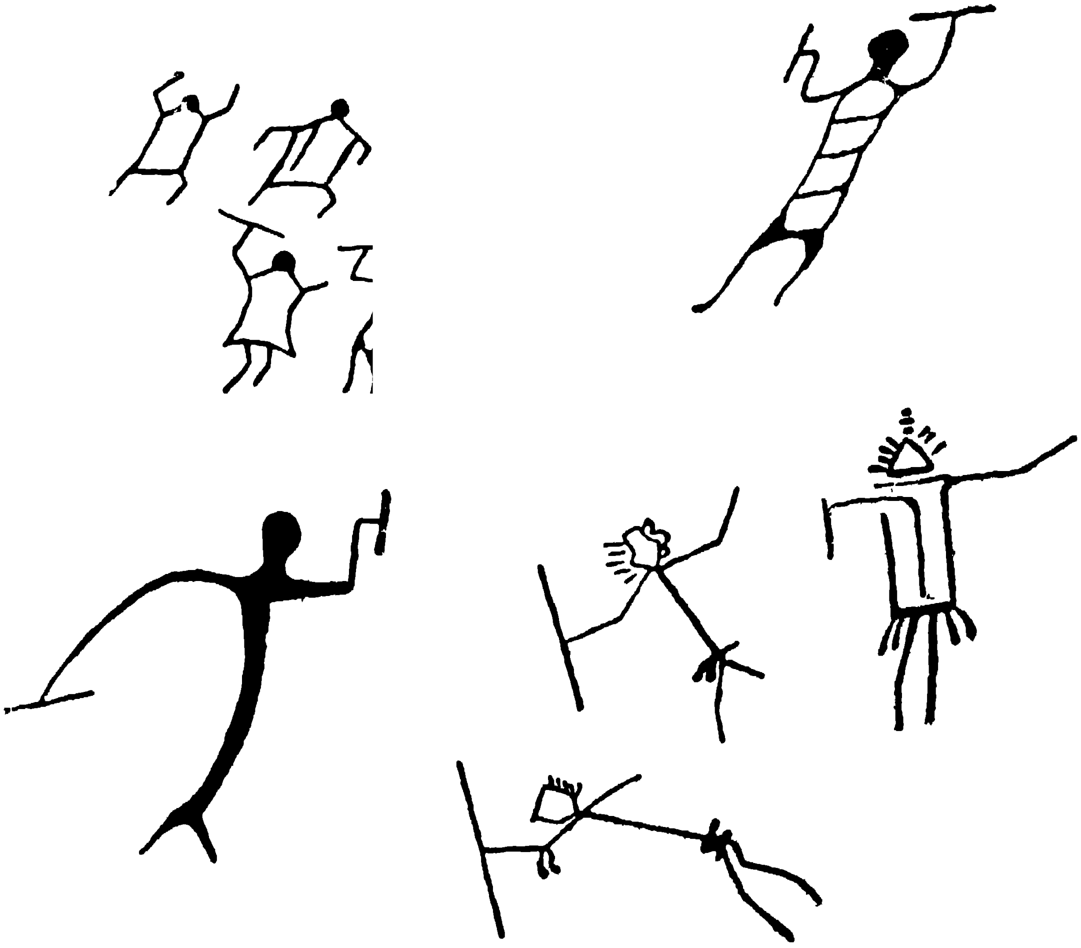

PLATE III

Hunters with long poles and no bows

(Rock painting from Mahādeo Hills, and Kabra Pahār)

(D. H. Gordon, Figs. 1, 3, 6, 11)

Mat-plaiting, rope-making and similar simple rudimentary arts were developed. Rafts made of pieces of wood tied together or of the basket type or canoes dug out with the help of fire and crude stone tools could have been in use. Some of the sharp scrapers and rough knives of stone found along with the crude stone hand-axes make it possible to conjecture that skinning of animals could have been practised. Such skins were used as coats in the cold regions, and in the tropical regions they were sometimes inflated and used for floating on water. They could also have been used for carrying and storing water. A dagger found in the Billa Surgam cave is made of the calcaneum proper of some large animal. The calcaneum proper is the handle and the narrow head of the weapon is cut out of the united fibula and tibia. Such a weapon would be a formidable one in the hand of a strong man.[1] Such bone weapons of different types could have been in use for purposes of defence and attack.

---

[1] S. Kiselyov, Archæology in the U. S. S. R. (translated by Mongait, Moscow, 1959), p. 69.

The main economic features of the second stage were the use of fire, first for warming and then for roasting meat, roots etc., a fish sustenance and manufacture of crude stone implements for felling and cutting trees and to serve as the tools of rudimentary carpentry.

The Palæolithic culture of this period appears to have been an inter-continental one. "At a given period in the Pleistocene, one can take, almost without selection, tools from South India, Africa and South England which show identical techniques of manufacture and form, and in all the three areas essentially the same evolution can be traced leading up to and developing from these forms and methods of manufacture. Tool-making traditions in the Palæolithic have trans-continental distributions : what happened at one end of the area seems to be happening more or less simultaneously at the other."[2]

That the evolution of man and his struggle to win bread had been uniform, even in that remote antiquity, in the different continents of the Old World is clearly demonstrated, for not only the technique of manufacture is the same but also the forms of the tools are identical. The story (in the main) is not different during the later periods.

The Third Stage (c. 35,000 to 8,000 years ago)

The invention of the bow and arrow marks the beginning of the third stage. Wild game became a regular item of food and hunting one of the normal occupations. "Bow, string and arrow constitute a very complex instrument, the invention of which pre-supposes long accumulated experience and sharpened mental powers, and consequently, an acquaintance with a host of other inventions."[3] We find, even at this stage, the beginnings of settlement in villages, a certain mastery of the rudimentary means of sustenance, wooden vessels as well as utensils and finger weaving (without looms) with filaments of bast rushes and fibre of palm branches.

---

[1] Records, Geological Survey of India, Vol. XVII, Part IV, page 202.

[2] Piggott, p. 24.

[3] F. Engels : *The Origin of of the Family. Private Property and State* (Moscow, 1948), page 35.

It was during this stage that the dog was domesticated. This animal extended the range of man's sensuous perceptions. It could pick up traces of scent that no human nose could smell. In the wild state he was a clever hunter. The combination of dog and man became a profitable partnership for both, but the lion's share went to man. The dog could track animals mile after mile over stony or leafy ground where no track remained to catch the hunter's eye. At night he could warn of the approaching danger.

The earliest clothing probably consisted of skins, methods of treating which were discovered very early. Skins of small animals could be cured merely by chewing. Larger skins were scraped and dried, then softened by rubbing in grease, by wetting and twisting or by various other methods. Rawhide making is very simple in most parts of India with a hot, dry climate, the leather being stripped green and dried. Bone needles, which have been found among pre-historic remains, testify to the age of stitching. Nature supplied the thread in the form of animal cords and tendons.

Fishermen used dug-out canoes of large tree trunks, plaited nets and made hooks of bone. Slow and fast games provided meat. Plants supplied roots, fruits and esculent leaves for food and fibres for baskets, bags, ropes and mats. Besides, man had by now learnt the medical properties of some of the plants. The technique of food preservation was mastered. From the mineral world came iron oxide to serve as red paint and kaolin for white pigment. Red mud and soft yellow stones were used for colouring or painting of a temporary nature.

The archæological evidence of the third sta ge is tobe had in the large number of microlithic deposits of small stone implements like scrapers etc. They exhibit an advance in the art of manufacturing stone tools. But along with them, in rare cases, hand-made and ill fired pottery pieces are noticed. This clearly proves that these microliths belong to a pre-pottery age. Further, Zeuner suggests that the predominance of the game fauna such as the rhinoceroses, hog deer, wild buffaloes, antelopes, black bucks and dogs and the absence of remains of domesticated animals along with microliths suggest that the microlithic people must have been mostly hunters.[1] The second series of the ancient rock painting of Mahādeo Hills and the paintings in the Mirzīpur area definitely belong to the period of hunters with bows and arrows. We see them often in conflict with wild beasts—confronting a tiger and a huge porcupine, being seized by a tiger and being eaten by a crocodile. The sambhar, both male and female, which they hunted, appears constantly. The elephant makes its first appearance at this stage. No oxen can be assigned to this period.

---

[1] Subba Rao, *The Personality of India.* (Baroda, 1956), p. 31.

At this stage man could own only what he could carry on his body, for he had to follow his hunting path from camp to camp. Strength, skill and wisdom were all that he needed for a successful existence. Some men were leaders and others followers, but the range of variation in personal material possession was very small. Only qualities of personality and character gave men distinction in that society.

The Fourth Stage (c. 8,000 to 6,000 years ago)

The fourth stage, the first of barbarism, dates from the introduction of pottery which had its origin demonstrably in the coating of baskets or wooden vessels with clay in order to render them fireproof. By that it was soon discovered that moulded clay also served the purpose of a container without the inner vessel, Thus, soon after pot-making, firing pots also came into practice. Pottery was only one of many kinds of containers, and even when it had come into use, it did not exclude the other varieties of utensils and containers. At first, pottery was made with hands and this was the case quite up to the end of the Palæolithic Age.

Possibly, the pots were rotated on hand and then on some round plank for greater symmetry, and this led to the discovery of the potter's wheel and the wheel which has been serving as the pivot round which man's progress centres. The potter's wheel first came into use among communities at the level of urban civilization, and one with a stopper has been found in the Indus excavations.

In India, the earliest available soft pottery dates back to 4,400 B. C. and painted wares to between 5,000 and 4,000 B. C. Details about early Indian pottery cannot be worked out with any precision for want of sufficient material. All that is possible to do at present about the earliest types is to define them and indicate their succession. In southern Balūchistān the earliest ceramic is "Niain wâre" excavated at Niain Buthi in Las Bela. It is a red ware with plum or brown slip on bowls or goblets with designs in black paint. At the type site, it is proved stratigraphically to be older than Nal or Kulli wares. Next comes the Nal pottery which ends at the beginning of the Harappan civilization and appears to be contemporary with the Amri culture. To the pre-Harappan Amri ware of the Indus may now be added another discovered by Stein at Kālepīr in Bahāwalpur. This, too, is pre-Harappan,

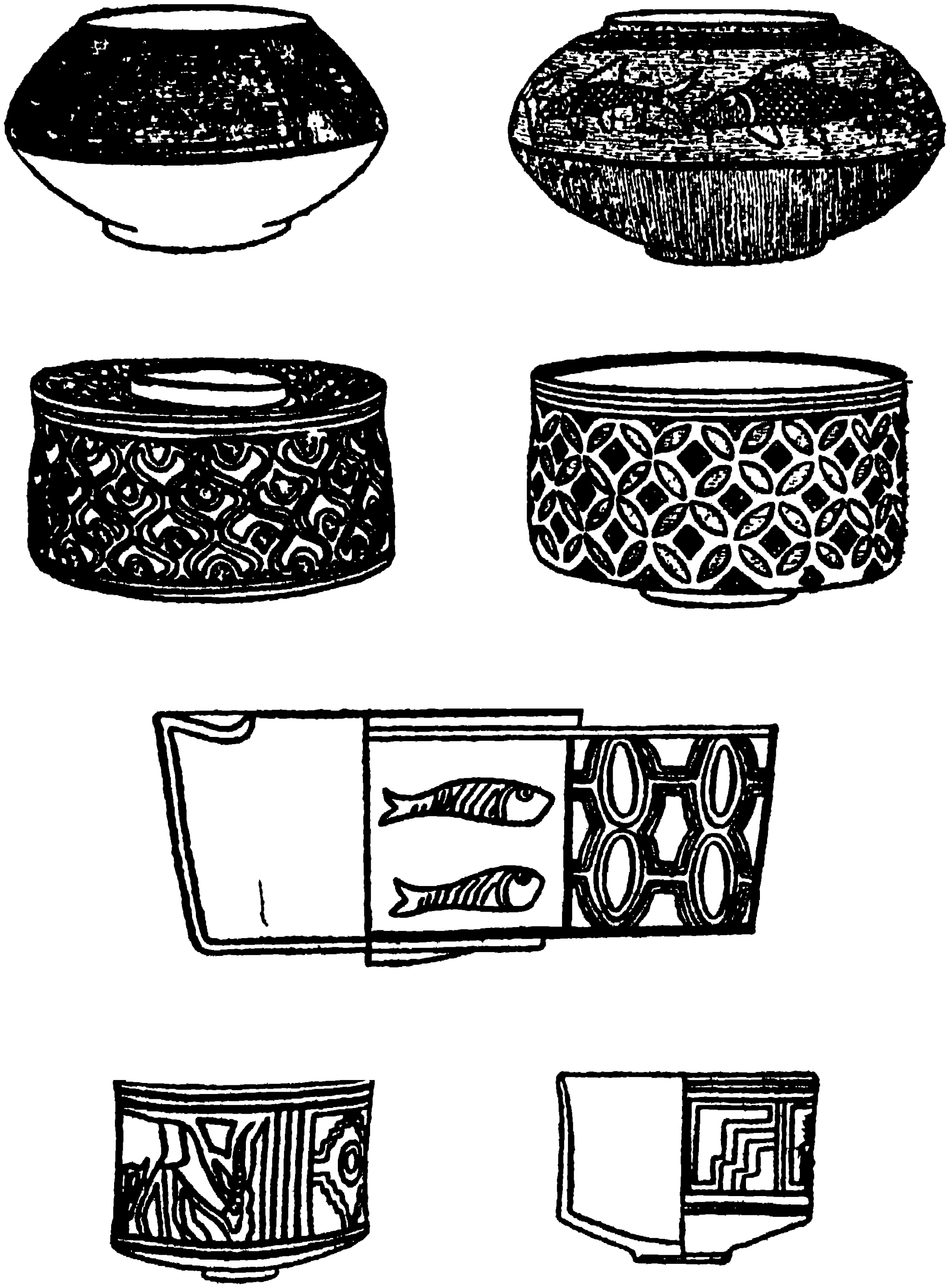

PLATE IV

Polychrome Nal Ware

(Red paint stippled, yellow horizontal and blue vertical shading)

(Piggott. p. 88).

and its design shows some similarities to Amri and Quetta pottery, though it is a separate ware.

"Amri is pre-Harappan and thus likely to be Early Dynastic and possibly earlier. Nal, Kālopār and at least part of the Quetta ware are roughly contemporary. Niain is earlier and thus likely to be at least Protoliterate in date. The Kulli culture is contemporary with the Harappan civilization and thus late Early Dynastic through Akkadian and possibly later. Niain ware cannot be related surely to any other,"[1] and probably belongs to the sixth or fifth millennium B. C. Still, from the description of the ware given above, it appears to be the product of an age in which Indian pottery had made some progress. The earliest efforts in pot-making should have been made earlier.

Up to this fourth stage economic development could have been fairly uniform throughout India with some of the remote and isolated regions lagging behind. After this the unequal endowment of the different parts of India begins to assert itself. Until India became independent, there were small isolated communities in remote forests and inaccessible mountains which had not advanced much farther than the stage of barbarism. Up to and during this stage, man hunted no more than most other animals did. The spears, bows and knives, that men had learned to fashion, were really nothing more than detachable substitutes for the fangs, claws and swift hoofs of the other animals, and to all practical purposes, from a cosmic view-point, nature was still in balance. Men had not yet felled the earth's forests, allowing its soils to be washed away. People lived in villages, consisting of houses built of pole frames with walls filled in with wattle and daub.

At this stage stone industry developed to such an extent that we get a large number of geometric microliths, more advanced and neater forms of hand-axes, ovates and cleavers, and blades and scrapers of generally fine grained cryptocrystalline varieties of squartz. The principal sites from which tools of this period have been excavated are Kulli II, Rangpur, Langhnaj, Āndhra Dēsa, Mahārāshtra and Tamil Nād. Surface finds are available from Mahārāshtra.

From a study of the tools available along with the early pottery pieces we are able to deduce a society which was familiar with the technique of carpentry. Stone tools required for cutting, scraping, boring and carving wood have been recovered. Rudimentary tailoring was in practice; for some bone needles have been found among the remains. *Cultivation of roots could have been practised with the help of certain long stone implements resembling a chisel or small crowbar.* Wooden hoes were also probably used for the purpose. An alround advance in the means of procuring food and arts of production and primitive exchange can be inferred.

---

[1] R. W. Ehrich, *Relative Chronologies in Old World Archæology*, (Chicago 1954), p. 63.

Exchange could only take place occasionally. Exceptional ability in manufacturing tools and weapons may have led to a transient division of labour. Unquestionable remains of workshops for stone implements have been found in many places. The artists who developed their ability in those workshops most probably worked for the community. "At any rate, no other exchange than that within the tribe could exist in that stage, and even that was an exception."[1]

The society that flourished during this stage was gentile. Growing out of the middle (pre-bow) stage, and developing further in the upper (bow and arrow) stage of savagery, the gens reached its prime, as far as our sources enable us to judge, in the lower (pottery) stage of barbarism. At this stage we find the gentile system fully developed. "The grandeur and at the same time the limitation of the gentile order was that it found no place for rulers and ruled."[2] Nor could class antagonism appear at this stage.

"The population was very sparse. It was dense only in the habitat of the tribe, surrounded by its wide hunting grounds, and beyond these, the neutral protective forests which separated it from other tribes. Division of labour was quite primitive; the work was simply divided between the two sexes. The man went to war, hunted, fished, provided the raw material for food and the tools necessary for these pursuits. The woman cared for the house, and prepared food and clothing; she cooked, weaved and sewed. Each was master in his or her own field of activity; the man in the forest, the woman in the house. They owned the tools they made and used; the men, the weapons and the hunting and fishing tackle, the women the household goods and utensils. The household was communistic, comprising several and often many families. Whatever was produced and used in common was common property: the house, the garden, the long boat. Here, and only here we find the 'earned property'".[3]

The mode of production remained unchanged. It could never give rise to antagonism between rich and poor, between exploiters and exploited. Men and women were masters of their production. All that they were worried about was good or bad harvest in their little gardens, the supply of fish from their lakes and rivers, or of game in their forests. The means of their sustenance could be meagre or abundant. They feared no social upheavals, no breaking of gentile bonds, or the splitting of the members of the gentes and tribes into antagonistic classes fighting each other. "Production was carried on within the most restricted limits, but the producers owned what they produced. This was the immense advantage of barbarian production which was lost in the transition to civilization."[1]

---

[1] Engels, p. 227. [2] Ibid., p. 225. [3] Ibid., pp. 225-26.

The Fifth Stage : *Domestication of Animals.*

The fifth stage commenced with the domestication of animals. It is reasonable to suppose that for a long time before this, hunters, fishermen and fowlers, who lived seasonally in villages, had made pets of baby animals and nursed them to maturity. The domestication of animals and breeding of herds had developed a hitherto unsuspected source of wealth and created entirely new social relationships. Until the fourth stage, "fixed wealth consisted almost entirely of the house, clothing, crude ornaments and the implements for procuring and preparing food, viz., boats, weapons, and household utensils of the simplest kind. Food had to be won anew day by day. Now, with herds of horses, camels, donkeys, sheep, goats and pigs, the advancing pastoral peoples.........acquired possessions demanding merely supervision and most elementary care in order to propagate in ever-increasing numbers and to yield the richest nutriment in milk and meat. All previous means of producing food now sank into the background. Hunting, once a necessity, now becomes a luxury."[2]

"The herding and care of domestic animals and their protection against predatory carnivores continued directly the traditional work of men ; from hunter to herder is a natural transition. The cultivation of gardens is an equally direct sequel to the woman's search for wild vegetable food. Thus, in the new pattern, each sex was able to make a parallel and separate transition from an old job to a new one."[3] But decidedly the woman lost her former importance and sank to a lower level. The man became supreme in the house and the woman became a negligible auxiliary. As long as old women's fingers remained nimble and their eyes unfogged, they could sit in the house spinning wool and weaving on simple upright looms. Thus, the wool of sheep sheared with a flint blade, could be turned into cloth. Squares of cloth were useful not only for garments but as standard articles of exchange, and hence of wealth.

---

[1] Engels, p. 160. [2] Ibid., p. 77. [3] C. S. Coon.. p. 120.

Domesticated animals originally belonged to the gens, and the chief of the gens was in charge of them. The road from custodianship to ownership in assets does not seem to have been very long.

"These pastoral tribes not only produced more articles of food, but also a greater variety than the rest of the barbarians. They not only had milk, milk-products and meat in greater abundance than the others, but also skins, wool, goat's hair, and the spun and woven fabrics which the growing abundance brought into common use. This, for the first time, made the regular exchange of products possible. (Now) we find all the conditions favourable for exchange between members of different tribes and for its further development and establishment as a regular institution. Originally, tribe exchanged with tribe through the agency of their gentile chiefs. When, however, the herds began to pass into private hands, exchange between individuals predominated more and more, until eventually it became the sole form. The principal article which the pastoral tribes offered their neighbours for exchange was cattle ; cattle became the commodity by which all other commodities were apprised, and was everywhere readily taken in exchange for other commodities—in short, cattle assumed the function of money and served as money already at this stage. Such was the necessity and rapidity with which the demand for a money commodity developed at the very beginning of the exchange of commodities."[1]

"How and when the herds and flocks were converted from the common property of the tribe or gens into the property of the individual heads of the families, we do not know to this day ; but it must have occurred, in the main, in this stage. The herds and the other new objects of wealth brought about a revolution in the family"[2] in favour of the man.

Agriculture

The climate of the Tūrānian highlands and the steppes north of the Black Sea do not admit of a pastoral life without a supply of fodder for the long and severe winter. "Hence, the cultivation of meadows and grain was indispensable. Once grain was grown for cattle, it soon became human food. The cultivated land still remained tribal property."[3]

Probably, rice was cultivated in India during this fifth stage. But the pre-history of the cultivation of rice is very obscure. One clue to the origin of cultivated plants lies in the identification of their wild prototypes. Botanists have gone on many expeditions to the supposed focal points to look for the wild ancestors of the present agricultural crops. George Watt discovered a belt covering Malabār, Tamil Nād, Āndhra Dēsa, Orissa, Bengal, Sikkim, Assam, Burma, and even possibly up to Cochin China, where wild rice is found. Naturally, rice should have been cultivated in this belt several millennia before Christ.[1]

---

[1] Engels, pp. 226-227. [2] Ibid., p. 229. [3] Ibid., p. 228.

The Kōl, the Khāsi and some non-Khamer groups used a primitive system of agriculture in which a digging stick (lage, lang, ling—various forms of an old word *lak*) was employed to till the hillside. It seems that even these primitive people knew the art of cultivating rice, cocoanut, plantain, betel creeper, betel-nut etc.

N. S. Vavilov writes : "That India is the native home of rice is borne out by the presence there of a number of wild rice species, as well as common rice, growing wild, as a weed, and possessing a character common to wild grasses, namely, shedding of the grain at maturity, which insures self-sowing. Here are also found intermediate forms connecting wild and cultivated rice. The varietal diversity of the cultivated rice of India is the richest in the world, the coarse-grained, primitive varieties being especially typical. India differs from China and other secondary regions of cultivation in Asia by the prevalence of dominant genes in the rice varieties."[2] It seems probable that rice cultivation began much earlier in India than it did in China, and the knowledge reached the latter country by way of the Yangtze, to make its appearance in the Chinese Bronze Age about 4,000 years ago.

As for wheat, the above mentioned scientist of the U. S. S. R. established by the study of wild wheat plants, that wheat was first cultivated in a belt of land stretching from Anatolia to West Pakistān. Therefore, we must look westward to Persia and Mesopotamia for the introduction of the art of cultivating that grain. A very large quantity of pottery belonging to the pre-Indus period has been recovered from different parts of India, but evidence of cereal grain impressions on them or carbonized grains themselves are not available to us.

---

[1] George Watt distinguishes three kinds of wild rice in India : (1) *Oryza Granulata*, found in Courtāllum, Malabār, Bengal, Sikkim, Assam and Burma, (2) *Oryza Officinalis*, found in Sikkim, Kharia Hills to Assam and Burma, (3) *Oriza Sativa*, found in Tamil Nād, Āndhra Dēsa, Orissa, Bengal (West and East), Arracan and possibly to Cochin China. He has even given details as to which particular wild variety was the source for a corresponding variety now cultivated. *Dictionary of the Economic Products of India*, (in 6 Vols.), Calcutta, 1891, Vol. V, pp. 500-504.

[2] *The Origin, Variation, Immunity and Breeding of Cultivated Plants*, (English translation by K. S. Chester), p. 29.

The chief occupation of the community in this stage was the daily care of animals, the preservation and processing of food stuffs and making animal and vegetable by-products such as wool and flax. A definite advance in carpentry, stone tools industry, weaving and knitting and other arts of peace and war is noticeable. In some of the daily tasks, the people of the villages worked separately as families, but in those which occurred seasonally and concerned all, the entire community worked together.

Early Indian Agricultural Communities

According to the archæological evidence at our disposal, the earliest agricultural communities of India were founded in Western India. It is quite possible that similar communities should have sprung up in other parts of the country as well, and we have some inferential evidence concerning such communities. The regions of Western India which comprise Balūchistān, Makrān and Sind are to-day forbidding, barren mountains, arid desert and sandy waste, but there is evidence to show that the climatic conditions of those regions were more favourable for human settlements in the distant past. "It is in these mountains and desert areas that the earliest agricultural communities yet known in India have been indentified. Human settlement in the region is likely to go back at least to the beginning of the third millennium B. C."[1] A large series of artificial stone-built dams and terraces, known locally in Jhalwān as *gabarband*, clearly appear to have been designed to aid the irrigation of fields.

Obviously, the Kulli-Mehi communities can only have been possible through the exercise of well regulated mixed farming. What form this farming took and what agricultural implements were used are very much a matter of inference. Nothing in the way of stone or metal hoes has been found, so any suggestion as to how the ground was tilled would be in the nature of a guesswork. Later, we find the Āryans using wooden plough. We may suppose that microliths featured as sickle flints. The tethered bulls on the pottery show that the Balūchīs of this period were familiar with domesticated oxen.

House Building

The methods used for building at successive periods are so little known that it is impossible to describe the progressive stages leading up to the rubble masonry set in mud mortar and the square and roughly bounded stone blocks found at Kulli, Mehi, Nundāra and many other sites. In these pre-Harappan sites of North-West India, stone was used for building at least the foundation courses of walls as evidenced by the architectural remains. At certain sites stone was used for the foundation courses and at others the walls were constructed with coursed stone slabs set in mud mortar at least up to window height. Here, large blocks of stone alternate with triple courses of small flat stones. At Nundāra some walls of mud bricks were found as well as masonry structures, the individual bricks measuring 21 by 10 by 4 inches. Here Majumdār recognised the outlines of countless rooms, both large and small, grouping themselves into blocks separated from one another by alleys 6 to 8 ft. broad in some places. At Lohri and Kohtras Buthi the alleys measured 2 ft. 6 inches. There is no temple or palace in any of the sites. There are indications of the use of wooden door-frames and flooring in the buildings.

---

[1] Piggott, *Pre-historic India*, p. 67.

Pottery

At Rīna Ghundai in the Zhob we get the earliest hand-made pots. Above these early pots is found another type of ware. Above it a bichrome ware is found stratified. This bichrome pottery was carried down into the plains by the first peasant farmers to settle in the Indus valley, where we find their villages scattered over a large area in Sind. The pottery produced by these farmers is known for convenience as Kechi Beg-Amri ware. The expansion of this ware marks the initial arrival of the peasant farmers in most regions, and it is now clear that the pots classed as Quetta ware succeeded those of Kechi Beg and Togan, and could themselves be divided into early and late types. The bichrome wares of Kechi Beg, Amri, Loralai III and Periano I are far more important, their wide distribution in space covering a period of spread from c. 2,900 to c. 2,650 B. C. by which time it may be presumed they had reached all these areas. The pottery types most commonly found in this ware are straight-sided beakers and, in the Zhob, globular bowls having a raised flange round the shoulder, usually pierced for a cord, and a low pedestal foot. An association with Amri is plain in very many of the Nundāra motifs and is traceable in some simple decorations of Nal pottery. Further, there are many points of resemblance between the Nal and Nundāra industries, stop patterns, concentric squares, single fan-like pipal leaves and, especially in the later stages, zones of sophisticated animals and fishes.

Metallurgy

In the ancient pre-historic communities we find that fairly soon after the agricultural way of life was established, a new discovery was made. Man found out that certain stones could, under certain special conditions of firing, be made by heat to turn into a tough substance which could be hammered or cast into any desired form, and that the new substance was capable of taking a sharp edge. This recognition of the relationship between copper ore and the metal was one with far-reaching consequences. Metallurgy in practice meant the discovery of the malleability of copper, its fusibility, the reduction of copper from ores and alloys. The utilization of the advantages of copper required a complex of ingenious inventions—a furnace with a draught to produce the relatively high temperature for fusion, crucibles to contain the molten metal, tongs to lift them with and above all moulds for casting. Casting is easier and the product is more reliable if to the copper we add antimony, arsenic, lead or, best of all, tin. By 3,000 B. C. the advantages of an alloy of copper and tin had been realized in India. Thus bronze had been discovered. The extractive industries had emerged in the form of the mining of flint as well as copper and tin ore. This exchange of commodities had reached such a scale as to comprehend commercial relations between people separated by hundreds of miles away. Smiths and miners not only possessed peculiar skills, but they had also been initiated into the mysteries of their crafts. The secrets of the crafts were not divulged to all members of the community. These specialists were not tied to any specified locality or bound by restrictions. With an easily marketable skill, they roamed from place to place diffusing their knowledge and skill among chosen pupils. Copper ore was by no means common. In most cases it had to be imported into the villages. This increased trade.

The culture of the region shows, from the beginning, significant links with the ancient Bronze Age cultures of the regions farther west. In the cemetry area of Nal in Balūchistān, two hoards of copper inplements were found, with no directly associated skeletal remains. These are presumably contemporary with the burials, for in an isolated grave in the same town a flat copper axe accompanied the burial and that axe is of a type similar to those in the two hoards. The copper, of which the tools are made, has a high proportion of nickel. It may be a local Balūchī ore, because traces of ancient workings are said to exist in that area.

The Mehi cemetry, suprisingly rich in copper and bronze objects among its grave-goods, argues for a knowledge of metallurgy comparable with that of Harappā. Here, in connection with a number of cremation burials, copper and bronze objects—pins, bangles, a copper bracelet, a small bowl and two mirrors were unearthed ; "and the most outstanding find is the copper mirror, 5 inches in diameter, with a handle (also of copper) representing a stylized female figure in the manner of the clay figurines, with breasts and conventionalized arms akimbo, but with the head provided only by the reflection of the user of the mirror. This amusing trick and sophistication of the metal work made the Mehi mirror stand out among the toilet accessories of the whole Ancient East. There is nothing like it in the otherwise more advanced Harappā culture."[1] The Balūchī culture appears to have preceded the Harappan one and flourished about 3,000 B. C.

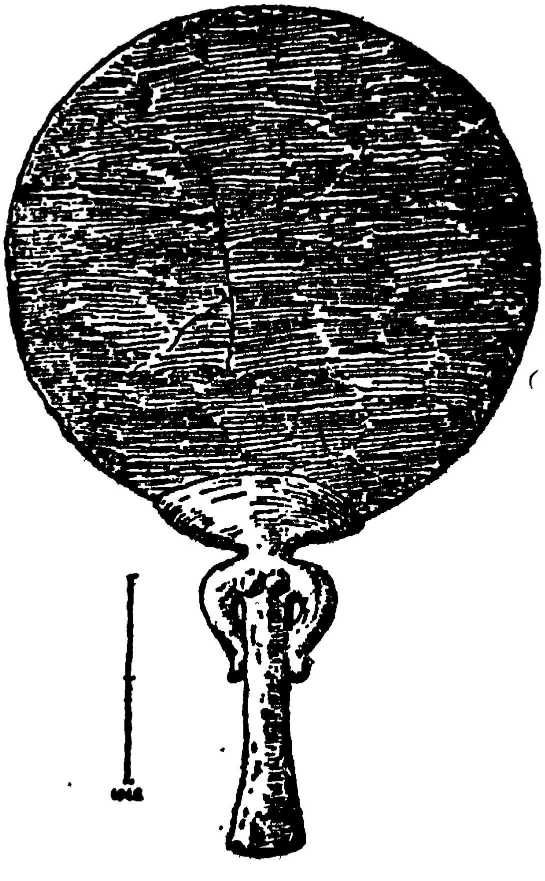

PLATE V

Bronze Mirror from Mehi

(Piggott, p. 112).

In spite of the use of some copper and bronze articles, there can be little doubt that these peasant farmers used stone inplements of a microlithic type. Everywhere in and around India stone blades of this type were used during this period.

---

[1] Piggott, *Pre-historic India*, p. 67.

Other Arts

The early appearance of mat-marked sherds shows a knowledge of weaving. A bone needle from Periano Ghundai is, along with the representation of skirted women on Togau ware, our only evidence for the making of clothes. Beads of carnelian agate and lapis lazuli were found at various sites, and their use for necklaces is attested by the multiplicity of these ornaments that adorn the mother goddess figurines of Mehi, Quetta and the Zhob. Artistically, by far the greatest achievement lay in their painted pottery, the bull decorated vases and bowls of Loralai II and of Kulli and the polychrome pots of the Nal cemetry being of outstanding merit.

Conclusion

Although these developments are clearly seen in the north-west region of India, there is evidence to show that several parts of India marched hand in hand : of course, the progress could not have been uniform in each and every area of the vast sub-continent. From the evidence available in the excavations of Central Deccan, Dr. Allchin suggests that the Neolithic settlers of that region domesticated the long-horned cattle.[1] Pastoralism involved mobility, for even hoe-cultivation, soon exhausting the land, forced settlements to seek new fields every few seasons. The region which comprises the Rāichūr and Bellary districts and part of Chitaldrūg district abounds in ground polished stone-axes. Regular excavations at Maski and Piklihal in Rāichūr, Sanganakallu in Bellāry and Brahmagiri in Chitaldrūg have established that these axes are to be associated with a hand-made Neolithic pottery, long parallel-sided blades with long worked points, crested flake and deep toothed blades which might have been used for cotton carding. These, together with the occasional lunate, relate to urbanized village communities like those we have come across in the north-west of India. The finds in this area included a small axe of copper and a bronze rod containing 9% tin. At Piklihal, near the fort of Mudgal, a settlement was discovered by Allchin in and around a group of rocky hillocks containing a number of caves and rock shelters. It had the remains of stone foundations like the ones we had noticed at Kulli, Mehi, and Nundāra. In view of the archæological evidence at our disposal, we shall not be far wrong, if we assert that about the year 3,000 B. C. many parts of India had a hunter, pastoral *cum* agricultural culture of the Copper or Bronze Age. There is definite evidence to show that the area comprised between lines drawn just east of Karāchi, south of Bombay, east of Bhīlsa and north of Ajmer which includes all the main groups of sites with wheel-thrown painted pottery, a flake-blade industry and a little copper (the Raugpur-Kathiawīr, the Mahēswar-Nagda and the upper Godāvari groups) had a culture akin to the Indus valley civilization of Amri and Chanhu-dāro.

---

[1] Subba Rao *Personality of India*, p, 50.

By the time we reach the beginning of the sixth stage of primitive society, we get a glimpse into civilized life. Private property in the shape of cattle and some form of continued tenure or rights over cultivated fields might have appeared. Slavery was already born, and slaves were, perhaps, still gentile or family slaves and not private slaves. In the pre-Harappan period we do not get evidence of high and low from the archæological excavations. The bases of houses discovered do not show great differences, and no evidence of structures which could be called palaces or temples is yet available. The rudiments of private property had emerged at the middle stage of barbarism soon after the domestication of animals on a large scale ; and certain bold features of that institution had appeared by the time smelting became widespread. Money economy in its elementary form with cattle as the medium of exchange should have been practised, but not on a large scale or covering a wide region.

CHAPTER II

THE ORIGIN OF PRIVATE PROPERTY AND SLAVERY

(Chalcolithic Age)

As we have seen in the previous chapter, during lower barbarian (early pottery) stage there was no possibility of private property. Each family possessed some personal belongings like weapons of stone, bone or wood, the hunting and fishing tackle, the household goods and utensils. The household or gens was communistic, and whatever was produced and utilized in common was common property.

In the early stage of the domestication of animals, the cattle belonged to the gens, and the chief of the gens was in charge of them. The original communistic common household or gens continued without exception. From the domestication of animals to agriculture (to provide fodder for the cattle) was a short step. Similarly, the road from custodianship to ownership of the cattle wealth by the chiefs does not appear to have been a very long one. Cattle might have become mine and thine even before the Indus valley civilization. With the practice of agriculture some form of continued tenure or right over cultivated fields might have appeared. The process of the development of private property, first noticed in that part of India which had the greatest facilities for its rapid growth, began about six thousand years ago with the domestication of animals, and further progressed with the practice of settled agricultural *cum* pastoral life, and even cleft society in twain into the exploiting and the exploited classes. A few slaves could have been owned by the gens or household even before urban culture developed in cities like Mohenjo-dāro and Harappā. In the Amri culture we get some proof of greater and lesser individual wealth ; for some of the bases of the houses are larger than the rest. This may be due to disparity in the wealth of individuals. We get definite archaeological evidence of the high and low, the rich and poor, and the exploiters and the exploited at the sites of the Indus valley civilization.

Throughout the greater part (later one) of the development of the peasant farming communities of Balūchistān, they had as their neighbours the remarkable people of the Indus valley with their urban civilization. The influence of that civilization, at its zenith, covered a vast area from Gujarāt to Rupār.

There is difference of opinion among scholars concerning the origin of the Harappans, a term used to indicate the people who developed the early Indus civilization with Harappā as the principal centre. D. H. Gordon thinks that they should have come from Mesopotamia by sea (for there is no trace of a migration by land) and planted in Sind a civilization highly evolved in the country of their origin.

The means of sea transport in that remote age does not warrant the assumption of the migration of an entire community by sea from such a distant place. Moreover, Piggott and other scholars have traced most of the earlier stages, necessary to develop such a community, in and in the vicinity of the Indus valley. Harappan remains in the upper strata of the villages which developed the Amri culture are indications of a slow cultural growth which at Mohenjo-dāro produced the great city. The Kulli-Mehi culture is certainly the precursor of the Indus valley civilization in many respects. Many of the elements of this civilization can be traced in the Indian surrounding. If we do not know another region within India equally developed, it is because there was no other area similarly determined as the one covered by the Harappan civilization.

Wheeler is right when he says that this civilization was the result of environmental opportunity offered to a people of creative genius[1]. There is much in common between the Harappan civilization and those of Mesopotamia and Īrān. Most of these common features might have sprung up independently, given identical conditions, and a few copied by one from another. The base was certainly local and many of the superstructural features can be traced out to Indian sources in the vicinity of the Indus valley and in the far South. Many of the articles unearthed are used in the South exactly in the same form. Wheeler is of the opinion that several metals like gold, copper and lead could have reached the Indus valley from South India.

"To sum up, then", in the words of Piggott, "the Harappā civilization, while largely self-sufficient and essentially Indian in its origins, and in the whole fabric and texture of its peculiar constitution, nevertheless did have certain intermittent outside contacts."[2] Even these contacts were passed on to them by the people of the Kulli culture. "One of the most notable peculiarities of the Harappan sites is the almost complete absence of objects that may be positively identified as contemporary importations. We know, for instance, that there was considerable Indian contact with Sumer ; for numbers of Harappan seals and beads have been found in that land. Yet, the contact would seem to have been almost wholly one-sided, for not even that most often lost of objects, the Sumerian or Babylonian cylinder seal, is found in India.[1] Nor is there more than the most meagre evidence in Harappā of other objects and practices of foreign origination, save for those of such elemental nature as can be explained by common descent from much more remote times"[2] Rather, they came into being independently determined by identical conditions.

---

[1] Wheeler, *The Indus Civilization*, The Cambridge History of India, Supplementary Volume (Cambridge, 1953), p. 14.

[2] Piggott, p. 210.

Evidence of private property, of high and low, of the exploiting and the exploited becomes pronounced during the Indus valley civillization. From several features of the architectural remains we can infer the existence of private property and its concommitants. In Mohenjo-dāro the doors of large buildings were placed in the narrow by-ways to avoid thieves and to conceal the wealth of the house behind blank walls. There are also certain rooms which seem to suggest that they were provided for watchmen. Many buildings contain remains of valuable merchandise in addition to personal property. Most of the houses are small, but there are some very large houses also. Some of the houses are separated from their neighbours' by at least a foot of space between the walls. Party-walls might, perhaps, have led to disputes. Hence each man preferred to build his house with his own four walls. The stairways had high narrow steps, sometimes fifteen inches high and only five inches wide. In an especially important house, which evidently belonged to a person of considerable wealth, a very spacious double staircase was discovered with threads only about two-and-a-quarter inches high and eight-and-a-half inches wide. The houses usually contained small kitchens. One kitchen found in a large establishment was more elaborate in construction. The smaller houses were entered directly from the side streets, the larger ones were approached through a courtyard open to the sky.

While the foregoing features establish the prevalence of private property, there are certain features which suggest inheritance. A

---

[1] Three cylinder seals have been found at Mahenjo-dāro (Mod. 1927-31, nos. 78, 376, 488), but none can be considered as anything other than Indian in workmanship.

[2] Starr (R. F. S.), *Indus Valley Painted Pottery* (Princeton, 1942), pp. 87-88.

"house originally intended for one rich family and many servants gradually deteriorated by constant sub-division ; each room would be turned into several smaller ones, doorways would be cut through partition walls, and even the courtyard would ultimately be threatened. It is probable that the latter was not entirely given up until the family was absolutely forced to do it ; but it certainly became smaller, and it is difficult to be certain whether or not it was entirely covered in during the last stages of the city's decline. Sometimes, the houses would be converted into a series of flats occupied by separate families, and each flat with its own staircase and sometimes, though not always, with its own drainage system."[1]

The very poor, probably, dwelt outside the city in daub-and-wattle huts. In any case, the cultivators of the fields and gardens around the city would have lived in near-by villages. Even the drainage system of the city suggests that the poor had a different method of disposing off their waste water. A large jar was partly buried in the ground to receive the water. Such jars sometimes had a hole in the base which allowed the contents gradually to drain away. Archæologists have excavated a large number of houses, big and small, which represent dwellings of a wealthy administrative and merchant class, a larger artisan class, and many slaves.

"Within the urban population itself, architectural remains reveal differences of wealth, amounting almost to class divisions. At Harappā, just below the citadel' were built rows of two-roomed detached cottages that demonstrably housed artisans. They contrast glaringly with the spacious two-storied houses comprising courtyards, bathrooms, many apartments and often a private well, that accommodated what may be termed the Harappan bourgeoisie. Yet, even in these houses, rooms on the ground floor served as shops and stores (godowns)."[2]

In addition to the above cited architectural evidence, the pieces of precious jewellery excavated from Mohenjo-dāro and Harappā furnish a more graphic story of the difference in the wealth of the inhabitants of those ancient cities. While the richer people wore jewels made of gold, electrum, silver, and other precious materials like riband-jasper, red, yellow and blue jasper, agate, moss-agate, onyx, amazon-stone, heliotrope, plasma, lapis-lazuli, tachylite, chalcedony, nepheline-sodalite, faience, breccia, serpentine, turquoise and hæmatite, the poorer classes had to be satisfied with ornaments of shell, pottery, copper or bronze. Three silver vessels have been discovered which should have been used by very rich families. All the other metal utensils, so far discovered, are made of copper or bronze and must have been used by the less rich ; the bulk of the population used earthen ware.

---

[1] Mackay, *Early Indus Civilization* (London 1948), p. 34.

[2] V. Gordon Childe, *The Most Ancient East* (London, 1922), p. 175.

Primitive society, with the crude instruments and knowledge at its disposal, did not enable a person to produce enough for himself and yield a surplus. What a man could produce was just enough for himself, his wife and children. At such a stage there was no room for slaves being brought into the social system and employed as such for the benefit of the commune. Now and then some war prisoners were adopted in the commune for exceptional beauty, strength or medicinal knowledge. Other prisoners were either destroyed or set free. With the domestication of animals, a man's labour yielded more than he consumed. After the herds had finally been converted into family possessions, a labourer acquired a surplus value and hence an exchange value. An additional hand meant augmentation of the possessor's wealth. The family did not increase as rapidly as the cattle. More people were required to tend them ; the captives taken in war were just useful for this purpose, and, furthermore, they could breed like cattle, though not so rapidly.

Further, when plant cultivation had advanced, a man at the plough was able to use man-power in a new way. The captive, if provided with hunting weapons, was likely to be dangerous, and if sent out collecting things in the wild state, could escape from captivity. With only the implements of agriculture in his hand (a hoe at first and the plough later, and even these made of wood) he was relatively defenceless before the sharp weapons of his captors and thus could be made a means of creating wealth for the masters without becoming dangerous. Moreover, agriculture is more settled and intensive than fruit-gathering, hunting or herding. Hence, the captive had less opportunity to escape ; for he was always under the eye of his owners.

"The increase in production in all branches—cattle breeding, agriculture, domestic handicrafts—enabled human labour power to produce more than was necessary for its maintenance. At the same time, it increased the amount of work that daily fell to the lot of every member of the gens or household community or single family. The addition of more labour power became desirable. This was furnished by war ; captives were made slaves. Under the given historical conditions, the first great social division of labour, by increasing the productivity of labour, and enlarging the field of production, necessarily carried slavery in its wake. Out of this first great social division of labour arose the first great cleavage of society into two classes ; masters and slaves, exploiters and exploited."[1]

In the early Indus valley, slave labour was an important feature of the economy and daily life of the people. "There is a class of small terra-cottas which represent squatting, probably male, figures clasping their knees, and these are found in fairly large numbers ; at Harappā museum there are 76 of them. Some of these figures have a round cap with prickings all over and a curious collar with a projection in front ; it is possible that they are slaves."[2]

Below the citadel of Harappā, on the north, there are remains of workmen's quarters—perhaps one of several in the city. The whole area in which these coolie-lines stood is, in Wheeler's words, "marshalled like a military contonment." Between the coolie-lines and the granary building there is a series of orderly rows of circular working floors carefully built of baked brick originally containing at the centre of each platform a massive wooden mortar sunk in the ground, in which grain could be pounded or husked with long heavy pestles in the manner still employed in many parts of India. Remains of wheat, barley and chaff were found in some of the central hollows.

"It is inevitable that one should mention slave labour when describing this piece of planned economy : the standardized little houses in dreary rows, the great state granary, the municipal flour mills. ... To Harappā civilization we must presumably attribute the first really organised industry in Western Asia, as distinct from that of a craftsmen's guild."[3]

The foregoing details establish beyond doubt that the Indus valley culture was one in which private property had emerged and with it slavery and the division of the population of that area into the higher and lower classes, the exploiters and the exploited. Further, from the architectural evidence furnished by the excavations at Mohenjo-dāro it is possible to surmise that with the emergence of private property and slave labour the third concommitant, the king living in a palace, also appeared. A very large building which has been excavated through several occupations was possibly the residence of a king or governor with the administrative office of the city.[4]

---

[1] Engels, pp. 228-29. [2] D. H. Gordon, p. 71.

[3] Piggott, p. 170.

[4] Mackay, *Early Indus Civilization*, p. 47.

Agriculture

There are many pieces of evidence to prove that agriculture was practised in the early Indus valley on a fairly large scale and that the basic economy was necessarily agricultural. The nature of the civilization implied a substantial middle class whose wealth and social surplus to support the administration and specialized craftsmen should have come initially from the livestock, substantially from a well organized agriculture carried by employing a large number of slaves; some additional finance came from trade and industry.

Some evidence of field-system and irrigation could have come down to us but for the fact that for three or four thousand years the flood-plain has been undergoing the process of being built up by alluvial deposits. Still, from the data gathered from the remains of the Indus cities it is possible to come to definite conclusions on this aspect of the economy. Several large buildings have been unearthed both at Mohenjo-dāro and Harappā adjacent to or forming part of the citadel area which could have only been granaries. "They are in one case provided with sleeper walls as airducts and in the other with a criss-cross lay out of passages for the circulation of air, thus ensuring that the grain was kept in good condition. At Harappā there are coolie-lines where labourers were quartered close by the granaries, in fact only separated from them by a series of platforms on which they worked pounding the grain into flour."[1]

In spite of the fact that an economy based on widespread grain production is incontestable, for it is proved by the survival of wheat and barley grains in the containers, we do not know how the fields were ploughed. No metal ploughshare has been brought to light. Obviously heavy wooden ploughs, with or without metal-shod ploughshares, dragged by oxen were used. Nor has any piece of stone or metal come to light which can be identified as a hoe. No complete metal sickle has been found although two objects may be recognised as the tip and butt respectively of a sickle.[2] No toothed knife has been discovered. Reaping may have been done with sharp blades of split bamboo. One reason for the absence of agricultural implements among the objects excavated is that a thickly inhabited city is not the place where such materials should be sought. The villages, where such tools are likely to be found, have not been adequately explored. Four objects of chipped flint have been unearthed at Mohenjo-dāro. Gordon

---

[1] D. H. Gordon. p. 70.

[2] Figures 7 and 12, Plate CXXVIII of Mackay's "*Further Excavations at Mohenjo-dāro, Vol. II.*"

Childe has observed that their general appearance is that of thick butted celts. Mackay has suggested that they may be a kind of ploughshare.

Our knowledge of the crops grown is derived solely from the grains and fruit seeds which happen to have survived in the containers. Wheat and barley have been indentified Several date stones and melon seeds have been recovered. There is evidence to show that peas and sesame and a variety of *Bassica* (perhaps the modern Indian *rāi*) were cultivated. There are representations of the palm and the banana trees, and a cocoanut-shaped earthen ware has been unearthed. May be that these two crops were produced by the Harappans. We have already observed in the previous chapter that cocoanut and plantain were cultivated by primitive people using a digging stick.

Cotton was one of the crops grown in the early Indus valley. Vestiges of a woven material found adhering to a copper object, which had been wrapped in it, have been identified as cotton cloth of plain weave dyed red with madder. These fortunate traces have been preserved by the metallic salt, created by the contact of copper with alkalies in the damp soil.[1] The use of cotton by the Harappans is the earliest use of that fibre in the world ; no earlier use is known. Bast fibres were also found at Mohenjo-dāro, in one instance wound round a fish-hook. "Cotton cloth is likely to have been an important article of commerce for the Harappā civilization, and it is probable that some at least of the trade with Mesopotamia was in cotton goods. By later historic times, in that country, Indian cotton was known under the name *sindhu*, and in the form *sindon* passed into Greek."[2]

Animal Wealth

Domestic animals include the Indian humped bull or *zebu* which was domesticated in Balūchistān, the smaller, shorthorned humpless species which was also domesticated in the Balūch country, the Indian buffalo, the goat belonging to the Kashmīrī type which produces the excellent wool from which the renowned Kashmīrī shawls are made, the sheep of the long-legged, long-tailed race which includes various wool-producing varieties and the pig which belongs to the lean, brisk, bristly species common in India to-day, the fowl, the dog used for purposes of hunting and keeping the watch, the cat for preserving grain from rodents, camels, some bones of which have been unearthed both at Harappā and Mohenjo-dāro, the domestic ass, the horse, already known to the first inhabitants of North Balūchistān, the elephant, perhaps tamed by them and made to serve man.

---

[1] Mackay, *Further Excavations at Mohenjo-dāro* pp. 441-42 and 591.

[2] Piggott, p. 155.

A large number of wild animals are represented by terra-cotta figurines or life-like representations on seals—the Indian bison, the rhinoceros, the tiger, the bear, the sambhar, the spotted deer, and the hog-deer. Some of these animals have since vanished from the Indus valley. Bones of all the above mentioned animals except those of the tiger have been excavated. There is evidence also for monkeys, turtles, hares, doves, parrots and other indeterminate birds. Some of the most skilful models of animals are made in faience which was well known to the Harappans.

Architecture and Masonry

One of the main elements of the Indus civilization is its town-planning and building in burnt brick. In Mohenjo-dāro the streets run in straight lines and are crossed by others almost at right angles. The cities of the Indus valley civilization are the earliest in the world to be built in accordance with a town-planning scheme. Planned towns at Ur, Babylon and Kahun (in Egypt) came into being much later. The masonry in the lower strata is excellent and the houses built with great care. Some of the main streets of Mahenjo-dāro are of considerable size. None of the streets or lanes are paved.

Both Harappā and Mohenjo-dāro were built entirely of burnt brick. The bricks are twice as long as they are wide and half as thick. They vary in size and are well baked to a pleasing light red colour. "As no brick-kilns have been found, the probability is that the bricks were stacked for firing in large heaps with flues between. The outside of the pile could then have been plastered with mud to keep in the heat."[1] Mackay is of the opinion that bricks were shaped in an open frame-mould of exactly the same type as that which is in use in India and other parts of the East to-day.

Only the corbel-arch was in use although the true arch was known in Mesopotamia at that time or even earlier. Bath-room pavements with bricks were rendered practically water-tight. In building walls the 'English bond' was used and walls were plastered with mud and sometimes with gypsum. Mostly mud-mortar was used and in special cases, such as the laying of drains, both lime and gypsum-mortar were employed. There is no evidence of any window. Some of the houses in Mohenjo-dāro, as already seen, are separated from their neighbours' by at least a foot of space between the walls. The steps leading to the upper story are high and narrow, except "in one especially important house," which has been noticed above.

---

[1] Mackay, *Early Indus Civilization (London 1948)*, p. 21.

Occasionally, a house has an outside staircase from the street, which suggests that the floors were occupied by different families. The roofs of the houses were flat and they were drained by projecting spouts made of pottery. Large rooms have one or more pillars, square or rectangular in section, meant to support the roof.

Floors paved with bricks were used in the upper-class houses. The poorer dwellings had floors of beaten earth coated with cowdung. The houses also contain small kitchens. Bigger houses have larger kitchens and more elaborate ovens. Practically every house had its bathroom which was always placed on the street side for the easy disposal of water. Pottery pipes each provided with a spigot so that they fitted together were occasionally used for drainage purposes. The bread was baked by heating the oven and clapping the cakes of dough against the hot inner side.

We see a marked deterioration in the quality of the buildings during the later stages of the Harappan civilization, for as we have seen above, "a house originally intended for one rich family and many servants gradually deteriorated by constant sub-division ; each room would be turned into several smaller ones, doorways would be cut through partition walls, and even the courtyard would ultimately be threatened.......Sometimes the houses would be converted into a series of flats occupied by separate families, each flat with its own staircase and sometimes, though not always, with its own drainage system."[1]

The drainage system of Mohenjo-dāro and Chanhu-dāro is the most complete ancient system as yet discovered. Every street had its brick-lined drainage channel (sometimes two) and so had even quite small lanes, and into these main drains ran smaller tributary drains from the houses on either side. In the poorer part of the city such a drainage system would have been too costly, and a large jar buried in the ground was often used to receive the water. These jars had a hole each at the bottom which allowed the contents gradually to drain away in the earth.

Mohenjo-dāro should have had an ample water supply, for brick lined wells are a common feature. Most of the larger houses had their own wells to which the poorer people had access. The wells were situated in rooms.

---

[1] Mackay, *Early Indus Civilization*, pp. 34-35.

Pottery

Pottery industry had reached a respectable degree of development although the varieties of shape are not many and the aesthetic appeal not very great. Most of the pottery is wheel-thrown and efficiently fired. The potters used the fast wheel and a peculiar stopper which is still used in the villages of that region. Some hand-made pottery has been unearthed from the lower levels. Plain undecorated pottery, which is more common, is made of the same clay as that of painted pottery.

The slip used for a great part of the painted ware is red ochre probably imported from Hormuz in the Persian Gulf. This thick, lustrous red slip was not only used for decorative purposes, but it was also meant to seal the pores of the pottery. A few vessels are decorated with manganese paint. Polychrome pottery is however rare.

The balck-on-red painted decoration on pottery was made with trees, leafy boughs, or creepers with repetition patterns—motives that can be repeated indefinitely in any direction. Figures of animals are quite exceptional and a unique sherd from Harappa depicts a farmer's family and live-stock. Another pottery piece shows a fisherman and nets.

Some feeding bins placed in the courtyards for animals have also been brought to light. Pottery jars were found sunk in the floor of some of the kitchens and into these was thrown the waste water which gradually disappeared into the earth through a small perforation in the bottom of the jar. A very large number of terra-cotta figurines have been unearthed.

A pottery candlestick suggests that houses were sometimes lighted with candles, a remarkable fact at such an early date. Normally, houses should have been lighted by burning some vegetable oil as done in other civilized countries.

Certain pottery objects have been identified as cake-moulds of a type that is still being used in India. Some rolling pins of pottery and stone have been found. They were meant for making the little flat wafer-cakes (*puris*) that are even now so popular in India. A little pottery spoon was found at Chanhu-dāro.

Certain thin pottery plaques, rectangular in shape, may have been used as writing-tablets from which the writing could be washed, after the fashion of the wooden tablets still used in India. At Chanhu-dāro, a small pottery jar, that could hardly be anything other than an ink-pot, was found.[1]

---

[1] Mackay, *Early Indus Civilization*, p. 106.

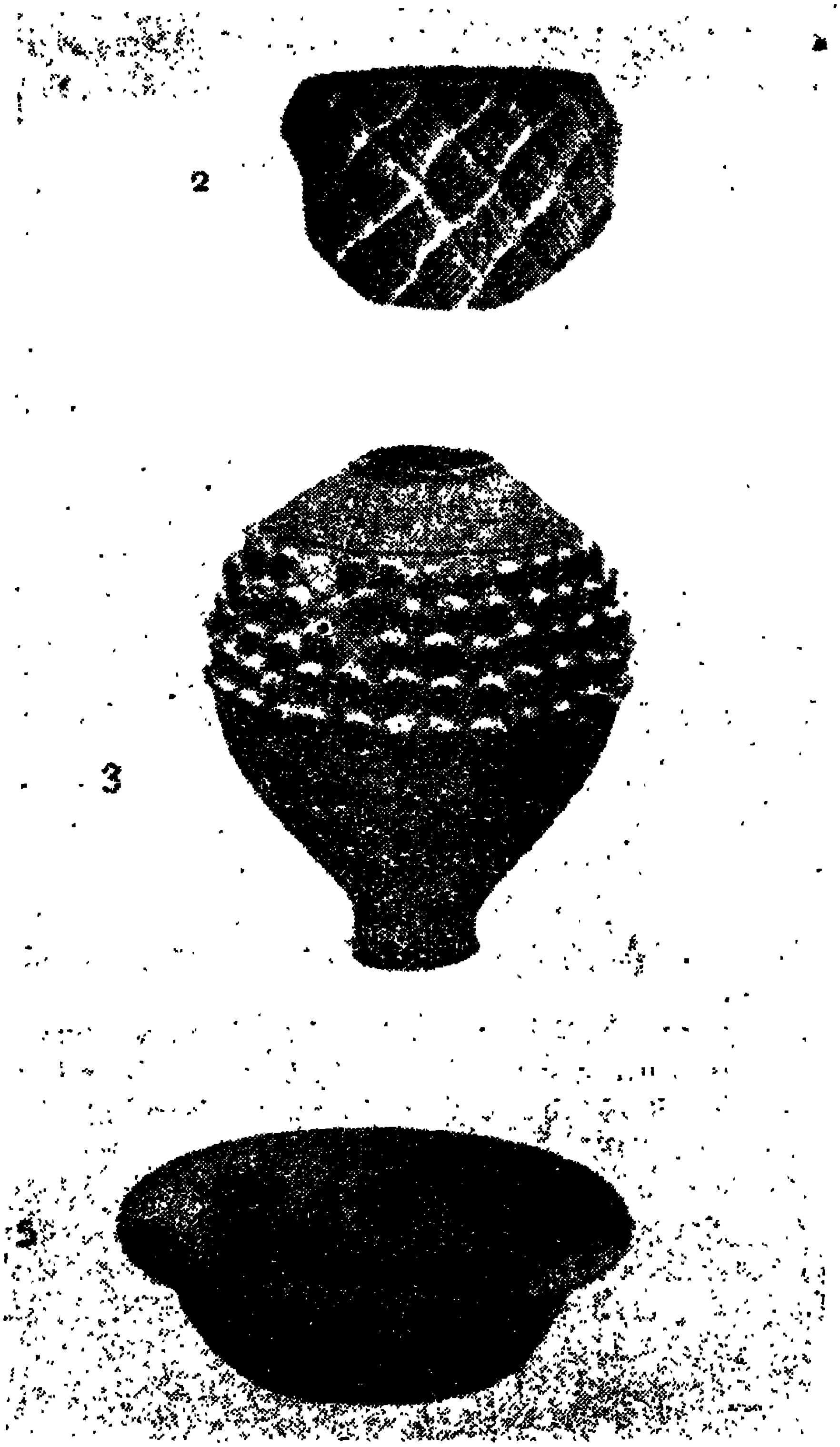

PLATE VI

2. Fragment of a steatitic vessel
3. Knobbed ware
5. Pottery candle-stand
(From Mackay's Plate O)

Stone Articles

Stone vessels are scarce. The majority of the pieces brought to light are shallow bowls, which are simple in shape, clumsy in workmanship, and carved out of the softer stones such as alabaster, sandstone, limestone or slate. A few more complex pieces, nearly all of which are of alabaster, imitate the pottery, but their interiors are so badly bored that they cannot have been of much use."[1] A tumbler about four inches in height is made of the rare jade-green crystalline stone called fuchsite available in Mysore.

Many saddle-querns made from a hard, gritty stone and curry-stones, have been discovered in the courtyards of Mohenjo-dāro, for the latter should have been the scene of household work. These saddle-shaped querns, similar in all respects to the ones used in the Tamil country, have a pronouncedly convex base to set them firmly on the ground. They were sometimes placed in large pans to prevent any waste of flour.. Other stones with large hollows were used for pounding grains or herbs with pestles. Such stones are used for husking paddy or pounding rice in the South.

A very large number of expendable utility knives made of stone —long, parallel-sided, ribbon-flake blades of chert—have been unearthed, and any number can be picked up all over the Mohenjo-dāro site.

Thirteen objects of stone, which may be described as works of art, have been unearthed, two at Harappa and the rest at Mohenjo-dāro. The former are both headless statuettes, well executed. But their age is a point of dispute among scholars. The Mohenjo-dāro set consists of the head and shoulders of a bearded man, 7 inches high, in steatite, three other heads in limestone, five stereotyped squatting or seated figurines, presumably of a god, a limestone figurine of a composite animal (a ram with elephant's trunk) ascribable to the same divine category and the fragment of a small limestone animal (probably a ram).

Seals

The distinctive products of the Indus art were the seals. They were engraved with legends in an undeciphered script and with admirably executed representations of animals, unicorns, short-horned bulls, Brāhmani bulls, elephants, rhinoceroses, tigers, buffaloes, crocodiles and antelopes. Very few seal impressions are available. There is one definite real sealing showing the impression of the cords and the matting package it was used to seal.[1] The seals are made of different materials. Some are of the opinion that they were tokens entailing an obligation to pay money. Others think that they were used as coins or amulets.

---

[1] Mackay, *Early Indus Civilization*, p. 122.

Metallurgy

Copper and bronze seem to have been in ample use ever since the beginning of the Indus valley civilization ; for the latter has been found even at the lowest levels of Mohenjo-dāro, where one specimen contained as much as 22.2 per cent of tin. Tin is available in the states of Bombay, Bihār and Orissa and could have been procured from any of these places. Copper could have been obtained from Rājputāna or Balūchistān. The use of tin to alloy copper has the effect of hardening the latter and it also facilitates casting. There is evidence in the specimens of ingots recovered to show that the method employed to smelt copper was crude and the cooling was not uniform. No trace has been found of soldering in the copper or bronze work, although this process was employed on gold and silver. Gold has been used for capping beads and for other purposes of embellishment on a small scale. Lead was also known and worked, but only one leaden utensil, a small dish, has yet been discovered. This metal has been unearthed in the form of irregular lumps. "Lead has been worked in India from very early times, and there is no doubt that ample supplies were available. It is indeed possible that much of, if not all, the silver used was procured from lead ore, the process of extraction being exceedingly simple."[2] Furnaces for metal work have been brought to light.

Metal Utensils

Three very plain silver vessels have been found. All the other metal utensils so far discovered are made of copper or bronze, the majority of these being extremely simple in shape. They were either beaten out of sheet metal or were cast. Some of the jars, with very narrow bases, had the latter made separately and then lapped on. With the exception of certain frying-pans, no metal utensil has yet been found with a handle or spout.[3]

Copper and Bronze Tools

Blade-axes of very simple forms appear to have been used for several purposes. They are of two types, the long and narrow kind and the short and broad variety. In both cases, whether of copper or bronze, the axe was cast in a mould and finished off with the aid of the hammer and an abrasive. Some of the blade-axes are of considerable size and weight. One of them, which is eleven inches in length, weighs four pounds three ounces. One very fine bronze axe-adze, about ten inches long, has a hole through the middle of the head to take a handle, and is the first socketed implement to be found at Mohenjo-dāro. One of the most interesting tools yet unearthed anywhere in the world is a bronze saw, sixteen and a half inches long, which had a broad wooden handle. The astonishing fact about this saw is that the toothed edge is undulated to prevent its binding in a cut in contrast to the modern method of setting each tooth separately. "Saws with the teeth set in any way whatever have hitherto been unknown before the time of the Romans, and it is extremely interesting to find so much earlier a specimen, and one, moreover, in such a good state of preservation."[1] Chisels have been unearthed in a large number. All of them have double-sloped edges and are made from round or rectangular rods of copper and bronze. In one hoard of copper found at an early level at Mohenjo-dāro some of the tools have pictographs incised upon them, and what appear to be numbers. Inscribed tools and weapons are more common at Harappa.

---

[1] Mackay, *Further Excavations at Mohenjo-dāro*, Vol. II, Plate CII, Figure 4. [2] Mackay, *Early Indus Civilization*, p. 101. [3] Ibid., p. 95.

No less than four types of razors were used by the people of the Indus valley. The most popular kind has opposite blades of dissimilar shape. Another is L-shaped. The third variety has a handle which terminates in a duck's head, and the fourth consits of a long, thin, straight blade with a rounded edge at one end. A large number of fish-hooks have been found at Mohenjo-dāro. These are made of bronze with a single barb and an eye at the end of the shank to secure the hook to the line. The numerous spindle-whorls with rounded tops and flat, or slightly concave, bases found in Mohenjo-dāro as well as Harappa show that the women spent some of the spare time in spinning thread which must have been of cotton ; for the majority of the spindle-whorls are too small and light to spin an elastic fibre like wool.

Works of Art in Bronze

The bronze sculptures unearthed from the Indus sites are small (minor) works. The dancing-girl from Mohenjo-dāro "is a skilful impressionistic rendering of a prognathic aboriginal type, with large eyes, flat nose and bunched curly hair...[2] A comparable but inferior bronze figurine was found in DK Area.[3] Of better quality

---

[1] Mackay, *Early Indus Civilisation*, p. 97. [2] See next page.

[3] Mackay, *Further Excavations at Mohenjo-dāro*, Vol. I, p. 274.

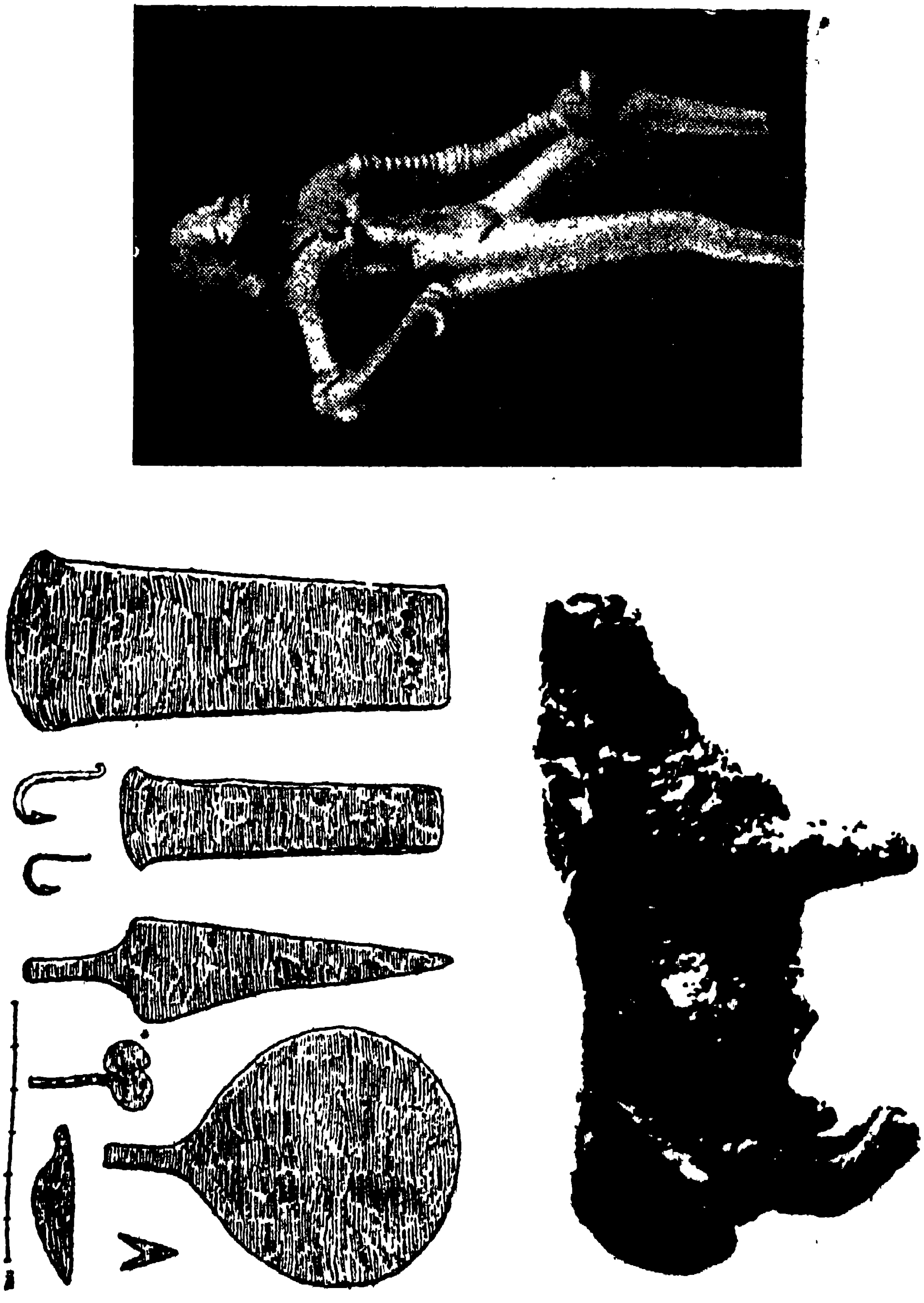

PLATE VII

Some of the Copper and Bronze Articles from the Indus Valley site is a detached bronze foot, wearing an anklet, found in a high (late) level ;[1] and amongst a number of bronze images of animals, a subject in which the Indus modeller was at his best, mention may be made of a buffalo and a ram or goat, also from Mohenjo-dāro.[2] In the former the artist has caught expressively the characteristic stance of the animal, with massive uplifted head and sweptback horns."[3]

Shell-Ladles

Ladles made of shell were in general use in the early Indus valley, as in Sumer, for a variety of purposes. They differed appreciably in size, ranging from under one inch to over nine in length. Simple shell dishes are not so common as the ladles. They should have been too valuable to be left behind when the city was abandoned.

Weapons of Metal and Stone

Two copper swords or dirks, the oldest ones so far discovered in any part of the world, are among the finds of Mohenjo-dāro. The spear blades were of very thin bronze liable to be bent out of shape. Daggers are sometimes difficult to distinghish from knives. They are long and leaf-like in shape. Arrow-heads fashioned from thin sheet metal with pointed wing-like barbs are very common. Quite a number of stone mace-heads, either pear or lentoid in shape, indicates that this form of weapon was much in use.

Wood Work

A few charred beams of *deodar* which must have been brought down from the hills to the north and of *sissoo* still grown in Sind are the only lucky survivals of the varieties of wood used by the people of the early Indus valley. "In some of the larger houses, however, deep recesses have been found in the walls, and these, in all probability, were once fitted with wooden shelves. Chests of wood must have also been used for storage purpose ; and to them probably belonged the numerous pieces of shell inlay that have been found. Fasteners of bone and shell attest the use of boxes, and we can safely say that beds and stools were also ordinary articles of furniture. A stool appears on one of the seals. Some of them had legs carved in the shape of a bull's foot, after the manner of ancient Egypt, but nothing very definite can be said on the subject of furniture as not a single article has survived."[4]

---

[1] Mackay, *Further Excavations at Mohenjo-dāro*, Vol. I, p. 273.

[2] Ibid., Vol. I, p. 283 ; Vol. II, plate LXXI, Fig. 23 and Plate LXXIV, Fig. 18.

[3] Wheeler, *The Indus Civilization*, p. 67.

[4] Mackay, *Early Indus Civilization*, pp. 39-40

Weaving

The art of weaving was practised, which was only one obvious step removed from the grass mat, which, in turn, was an adaptation of the woven basket, and the still cruder wall of interwoven uprights and switches used by savages to shut out wind, sun and prying eyes.

Commerce

Copper may have been obtained from Rabāt and Shāh Bellaul in Balūchistān or Khetri in Rājputāna. Some of it may have been brought from South India or Afghānistān. The metal has been used for the manufacture of tools, weapons as well as vessels. But the sparing use of the metal in making the spear-heads and knife-blades suggests that the metal was not available in abundance. Tin should have been procured from Bengal or Afghānistān.

Gold may be washed from the sands of many of the great rivers of India, and is available in large quantities in the South. In the Mysore State it is mined. Gold came to the Harappans probably from the South. Some may have come from Afghānistān and Persia through trade-channels. Silver, as we have already seen, may have been separated from lead. The nearest source of lead is Ajmer. It is available also in South India, Afghānistān and Persia. Lapis-lazuli may have come from Badakhshān, the turquoise from Khurāsān, jade from Burma or Central Asia. The source of fuchsite, of which the tumbler is made, may have been Mysore. The green amazonite, used for a bead, may have had its origin in the Niligiris or the Hīrāpur plateau north of Ahmedābād. Marble came from Rājputāna and *sank* shell from South India.

A study of the sources of the material used leads us to infer contacts with neighbouring regions—Rājputāna, Gujarāt and Balūchistān and with far off places like South India, Afghānistān and Persia. Most of the traffic may have been overland and some by water in such frail vessels as are depicted on a seal and a potsherd-graffito from Mohenjo-dāro.[1] A large number of articles discovered in the Indus valley sites resemble objects unearthed in Mesopotamia. This has led several scholars to assume trade connections between the two regions and some to infer seaborne trade. "The only evidence which has yet come to light which suggests that the products of the Indus cities may have been carried westward by sea is the picture of a masted boat scratched on a potsherd ; yet this, like the boat on the seal

---

[1] Mackay, *Futher Excxvations at Mohemjo-dāro*, Vol. 1, p. 340 ; Vol. 11, Pl. LXIX, Fig. 4 and Pl. LXXXIX, Fig. A.

(Pl. XVII, 14), may represent merely a river vessel."[1] These frail vessels possibly ventured on very long coastal voyages to distance places like Mesopotamia. As we have already seen, there are more objects of Hàrappan origin in the cities of Mesopotamia than those of that country in the Indus valley. In spite of it, the Harappans must have received the price of their cotton and other exports in some form or the other. Most likely they received metals like gold, silver and copper in exchange.

"All this trade, quite apart from that within the boundaries of the Harappā kingdom itself, must have involved a considerable merchant class, with the attendant organisation of caravans along recognised trade-routes and not improbably the provision of halting-places or caravanserais in the remoter districts : I have suggested that such small sites as Amilano in Sind might represent such serais."[2]

Weights and Measures

Stone weights made of carefully polished and often beautifully veined chert are extremely common. The Cube is the most usual form. Cubic weights have been found ranging from minute specimens to those weighing as much as about 275 grammes. Flat spherical weights take the next place. Of these, too, quite large sizes have been discovered. Some weights are barrel-shaped like those that have come to light in Egypt, Sumer and Elam. Some weights of great size are conical and have holes in the top for the ring of metal or rope by which they were lifted. One of them weighs over twenty-five pounds. Several kinds of stones were used for making weights—alabaster, limestone, quartzite, slate and jasper ; but chert predominates. None of the weights bear any number or script. A few pebble-weights have also been dug out. They are rare.

"A. S. Hemmy, who has examined the weights from Mohenjo-dāro and also some from Harappa, states that the system used was binary in the case of the smaller weights and decimal in the case of the larger ones, the succession being in the ratios 1, 2, 2⅔, 4, 8, 16, 32, 64, 160, 200, 320, 640, 1,600, 3,200, 6,400, 8,000, 12,800 and that the unit weight had the calculated value of 0.8565 gramme. The same authority is of the opinion that, with the possible exception of a very few weights, the system used by the Harappan people bears no relation to that of the Babylonians, and though one group of weights strongly resembles the ancient Egyptian *beqa*, he regards them, nevertheless, as quite independent. Very few of the weights from Mohenjo-dāro, considering the great number found, were bad or fraudulent, a fact which shows that stringent trading regulations existed in the city."[1]

---

[1] Mackay, *Early Indus Civilization*, p. 151.

[2] Piggott, p. 175.

The scale used consisted of a bronze bar with suspended copper pans. The beams used with the heavy weights would have been of a large size and made of wood. One measure only has been discovered at Mohenjo-dāro and this merely a fragment. It appears that it was once part of a longer measure on the decimal system. Another bronze rod from Harappa was marked in units which can be related to the cubit of 20. 62 inches. Wheeler has shown that a series of measurements at Harappa and Mohenjo-dāro are clearly related to a system with a foot ranging from 13.0 to 13.2 inches and a cubit from 20.3 to 20. 8 inches.

Transport

The chief means of transport to near places seems to have been the bullock cart in addition to the back of animals and the heads of men and women. Model clay carts have been found on all the Harappan sites, which, when assembled with their wheels and upright stakes, resemble very closely the bullock carts used in Sind at the present time. Tracts of the full-sized carts have been found, and the standard width of the wheel-gauge is thereby shown to have been 3 feet 6 inches. Even now the same is the width of the wheel-gauge. The wheels, as depicted in the terra-cotta models, were made of three solid planks. Two-wheeled vehicles, other than the ox-cart, are represented by some bronze toys. Terra-cotta models of four-wheeled carts, resembling the modern *ekka*, have been brought to light at Chanhu-dāro. Probably these were drawn by horses or asses. Even to-day asses are harnessed to carts in Sind.

Longer distances should have been covered by caravan pack transport, of which camels, horses and asses might have been components. A part of the scapulla of a camel was found at Mohenjo-dāro, constituting the only direct local evidence. A representation of a seated camel from a grave in Persia, contemporary with the Harappan culture, suggests the possibility of camels having been tamed by that time. The bones of horses and asses have been brought to light either at the Harappan sites or the earlier Rāna Ghundai site in northern Balūchistān. There is no evidence of the existence of a mule. Possibly the elephant was tamed for transport or haulage. The two pieces of evidence referred to above concerning the use of a ship "show a craft with sharply upturned bow and stern of a kind paralleled in Crete, Egypt and Sumer. One of the representations shows a mast and yard, the other a central cabin and a man at the steering-oar. These may be river-craft, but there is no reason to suppose that similar small ships were less venturesome than the Arab dhows of to-day."[1]

---

[1] Mackay, *Early Indus Civilization*, p. 103.

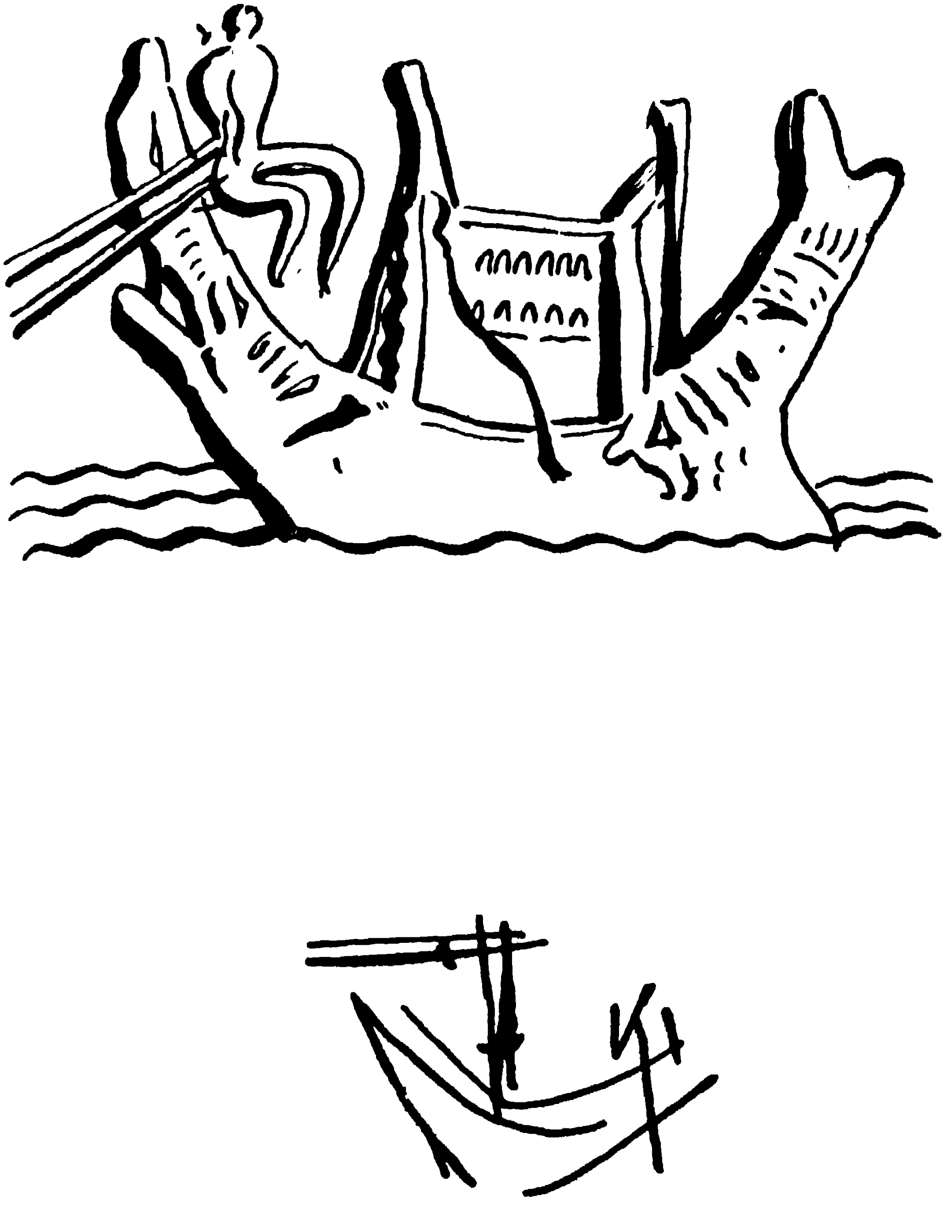

PLATE VIII

Boats scratched on materials from Mohenjo-dāro

Conclusion

In certain particulars like the remarkable drainage system of Mohenjo-dāro, the metallic saw and the manufacture of cotton cloth and candles the Indus valley economy was far in advance of that of any other part of the world at that time. In many respects the Indus valley economy was fairly comparable to that of Egypt or Sumer—domesticated animals, agriculture, burnt brick, a textile industry using cotton also, drilling of hard stones for beads, metallurgy, a system of weights and measures, an effective administrative body, careful town-planning and enforcement of adherence to it, maintenance for a considerable period of the standard of building and of sanitation, and a script.

---

[1] Wheeler, *The Indus Civilisation*, (The Cambridge History of India, Supplementary Volume, (Cambridge, 1953), p.60.

Even with all these achievements we cannot say that the Harappans had emerged out of the stage of barbarism. The cultural stage can be recognised as only chalcolithic (using copper and stone implements), as stone objects ranging from minute weights and expendable knives to heavy plough-shares, maces and grinding stones were in general use, of course, "within a restricted range of simple forms." The standard of metallurgy was not high except in a few cases. Some of the lumps of the ore unearthed show that the method adopted for smelting was crude ; cooling was defective and the proportion of tin and arsenic uneven. In short, the Harappan culture was a chalcolithic one based on domesticated animals and peasant farming having trade connections with adjoining areas and occasional contacts with distant Indian ports and foreign countries. It was still in the barbarian stage having not yet established any right to be called civilized. The utmost that one can say is that the early Indus valley people had a peep at the twilight of civilization.

As far as the economic base of the early Indus culture is concerned, there was nothing new in it. The stage of domestication of animals and peasant farming had been reached in many regions of India, especially in and in the vicinity of the Indus region. Smelting copper and other soft ores was in vogue in several parts of India even before the Indus age. The Mehi mirror reproduced in the previous chapter is a remarkable piece of evidence. Even contact with foreign lands were established by the Kulli folk and passed on to the Harappans. Thus there was nothing extraordinary to warrant the assumption that it was imposed from without. It was a remarkable flower produced in the local garden (among many other flowers of lesser merit) of which India could be proud among the nations of the world.

This proud culture was partly destroyed about 1,500 B. C. by Āryan barbarians, occupying a bit lower level in the same stage of civilization, who halted the further progress of economic development in the north-west of India for a time. It is not correct to imagine that the Āryans destroyed all the achievements made by the Indus valley people and those others who were in or near about that stage of civilization in India. The Āryan invasions gave a setback to the march of economic progress. But it was temporary. Many of the Harappan institutions, arts, crafts, and a good deal of intellectual attainments were assimilated by the Āryans and later developed. The Harappan heritage was there and also the near-Harappan culture in many other parts of India which required some revitalization. That was supplied by the virile barbarians from the North and a new synthesis was formed. The advent of the Āryans arrested and retarded the flow of economic development in the North-West for a time. But the wave, halted and forced to recede in one area, returned with greater vehemence and carried the people of India, Āryans as well as others, on the road of progress and development.

CHAPTER III

THE VEDIC SETBACK (C. 1,500-700 B. C.)

Excavations at Boghāz-koi, in ancient Pteria, have brought to light certain inscriptions recording treaties between the Hittites and the kings of Mitāni (c. 1,400 B. C). They contain the names of deities which figure in the earliest sections of the Rigveda—Indra, Varuna, and the great twin brothers, the Nāsatyas. These names appear almost in the same forms in which they occur in the hymns of the Rigveda. This shows that the Mitāni branch and the Vedic branch of the Āryans parted not many centuries before 1,400 B. C.

The earliest evidence of the approach of the Āryans is the bronze axe with an oval shaft-hole, discovered in a grave at Khurab in Persian Makrān, which cannot be dated earlier than 1,850 B. C. The Shāhī Tump burials, which are Āryan, belong to a period shortly after 1,800 B. C. The Indus valley cities were sacked by foreign invaders, probably Āryans, about 1,500 B. C.. Max Muller, on the basis of internal evidence, places the Chhandas, covering the older and more primitive Vedic hymns between 1,200 and 1,000 B. C.

The above pieces of evidence as well as the deterioration of the climatic conditions of Central Asia and the outgrowth of its population about this time indicate that the Āryans, driven by economic factors, and the lure of a country, to be easily conquered and more easily held, entered India about 1,500 B. C., conquered the Harappans and destroyed much of their urban civilization.

The Harappan culture was destroyed by the Āryans who came to North-West India in several waves driven by economic causes. The newcomer also belonged to the chalcolithic culture, although they had not advanced as much as the Harappans. They used a few tools and weapons made of copper as well as bronze along with stone implements. They had domesticated several animals and possessed a knowledge of agriculture. Hence, the basic economic stage of both the Harappans and the Āryans was a chalcolithic one with peasant farming and domesticated animals. The Āryans occupied a lower position in the same stage of civilization in a general sense. Economically, the

Harappans, who were a local people, permanently settled in an area, were able to evolve private property in houses and possibly in fields also. The early Āryans were immigrants who got no opportunity to develop an urban culture. They could have developed one with the technique available from the conquered people. But their early settlements were on the way of later Āryan waves. The earlier arrivals were pushed on and on among warlike local inhabitants. Thus, each wave had to fight enemies in the front as well as on the back, getting no time to develop the arts of peace.

The Vedic setback could have been effective only in a limited area of India—the North-West. Most parts of India, especially rural areas, which formed the bulk of the country, were almost on the same level of civilization as that of the Āryans. As a matter of fact, the Āryans cut off only the spear-head of the economic advance in the Indus valley and straightened the line of development throughout the forward regions of India.

We have evidence of a Bronze Age culture as ancient as that of the Indus valley in certain parts of India which were not affected by the early Āryan invaders. Most of the sites excavated in South India belong to the Iron Age. Possibly there are some Copper Age sites awaiting the excavator's spade. Moreover, there are not many known ancient copper mines in the South. In spite of these limitations, copper articles of pre-Āryan origin have been recovered here and there. The axes used in other parts of India, especillay in Eastern and Southern India, during the period immediately preceding the Āryan invasions were of stone with a pointed butt. There is evidence to show that these pointed butt axe people used copper objects resembling those of the Indus valley people. Copper flat axes are found in Bihār.[1] A pre-Āryan copper disk or dagger has been found in the Bulandshahr district along with two copper axes in a *khera* or mound ;[2] and the Manipur dirk has more than a passing resemblance to the later period dirks from Mohenjo-dāro. Moreover, even all the copper hoards of the Gangetic basin do not belong to the Āryans. Among them there are some implements which are of non-Āryan origin. Recently B. B. Lal has attributed the copper hoard of the Gangetic basin to the "Mundas, Santals and other tribes belonging to the Proto-Austroloid group of the Indian population."[3]

---

[1] Gordon, *Indian Megalithic Cultures—Ancient and Modern,* Illustrated London News, July 1st, 1950.

[2] Ibid.

[3] *Ancient India*, No. 7, 1957, pp. 38-39.

Thus, it is certain that the pre-Āryan chalcolithic culture was not limited to the Indus valley alone, but there were also other areas in India where the use of copper was known, although the implements and tools in general use throughout India were mostly of stone. Development in those areas would have continued unhampered by the Āryan invasions.

The Āryans did not destroy the Harappan culture completely. There should have been many survivals. Much of the skill of the artisans, taken captive or suffered to continue under the Āryans, should have been available to continue the thread of economic progress. The later punch-marked coins (c. 400 B. C.), with their symbols reminiscent of the Indus valley script, and with their standard weight conforming to the weight system of Mohenjo-dāro, constitute an important survival of the Indus valley civilization. So do the die-struck and cast varieties of the ancient Indian coins. There is little doubt that the Āryans compromised with the mercantile Panis and the Asuras (who were regarded as magicians). The influence of the Asuras[1] became so pervasive as to supplant to a great extent the religious ideas of the Vedic Āryans. According to Hutton, "Even if this (Harappan) culture disappeared entirely from the Indus valley, it may well have survived across the Jumna with sufficient vigour to react to the Rigvedic Āryans whose religious beliefs it ultimately submerged in its own philosophy."[2]

The population of the North-West certainly had four elements—aboriginal hunters, early peasant farmers, the Harappans and the Āryans. The later Āryan society was an amalgum of these four elements. There is little doubt that, as indicated by Slater and Hutton, there were *rishis* and priests in Vedic times who had been brought up in the civilization of the Indus valley, among whom there may well have been some of the Āryan newcomers, "who may well have shared the mathematical and astronomical knowledge of contemporary Babylonia."[3]

In spite of all that has been said, there is absolutely no doubt that from the economic point of view, the Āryans were in a lower level of culture than that of the Harappans. The standard of living in the Vedic period must have been squalid when compared with that of the Harappans, their settlements consisting of very poor hutments clustering together. The bulk of the Āryan copper and bronze articles recovered

[1] A people different from the Vedic Āryans.

[2] Hutton *Caste in India*, (Cambridge, 1946), p. 131.

[3] Ibid., p. 132. Also see D. H. Gordon pp. 95 and 129.

can be dated only after 800 B. C. and the most advanced types of swords and harpoons, cannot be dated earlier than 700 B. C. Hence, the early Āryan copper and bronze equipment could have been only meagre and not of a very superior quality. Further, neither from the remains of the early Āryan invaders nor from the early Vedic hymns can we deduce that there was private property in land. There could have been personal property in the form of dress, ornaments, weapons etc. and perhaps, private property in flocks. The chance of flocks belonging to the *gana* (gens or household) among the early Āryans is considerable. But, in all probability, the land on which houses were built and cultivated land had not become mine and thine, although certain rights of continued tenure might have been assigned to the gens and recognised as normally inviolable. These allotted or assigned lands could only have belonged, if at all they belonged, to the *gana* or gens. These facts prove conclusively that the economic base of the Vedic Āryans was more backward than that of the Harappans and that the Āryan invasion and occupation of North-West India set back or held up the economic progress of that region for several centuries.

The Āryans were in a stage in which cattle and slaves might have become the property of the gens and even of individuals. It is also possible that lands acquire in India also became the private property of the gens or *gana*. The stage of their culture was one in which land could have become private property, but as they were an invading people, who came into the possession of already cultivated land, they seem to have assigned it to the *ganas*. It took sometime before private property in land could appear among the Āryans.

The continuance of the household community—a relic of an earlier stage of economic development—with common tillage of the soil was mentioned by Nearchus in the time of Alexander the Great, and it existed until recent times in the same area—the Punjāb and the entire North-Western frontier regions of this country. Speaking about these communities, Karl Marx writes : "These small and extremely ancient communities, some of which have continued down to this day, are based on possession in common of the land, on the blending of agriculture and handicrafts, and on an unalterable division of labour, which serves, whenever a new community is started, as a plan and scheme ready cut and dried. Occupying areas of 100 up to several thousand acres, each forms a compact whole producing all it requires. The chief part of the product is destined for direct use by the community itself, and does not take the form of a commodity. Hence, production here is independent of that division of labour brought about, in

Indian society as a whole, by means of the exchange of commodities. It is the surplus alone that becomes a commodity, and a portion of even that not until it has reached the hands of the state, into whose hands from time immemorial a certain quantity of these products has found its way in the shape of rent in kind.[1] The constitution of these communities varies in different parts of India. In those of the simplest form, the land is tilled in common, and the produce divided among the members. At the same time, spinning and weaving are carried on in each family as subsidiary industries. Side by side with the masses thus occupied with one and the same work, we find the chief inhabitant, who is judge, police, and tax-gatherer in one ; ... the Calendar-Brahmin, or astrologer, who makes known the lucky or unlucky days for seed-time and harvest, and for every other kind of agricultural work ; a smith and a carpenter, who makes and repairs all the agricultural implements ; the potter who makes all the pottery of the village, the barber, the washerman, who washes clothes, the silversmith, here and there the poet, who in some communities replaces the silversmith, in others the schoolmaster. A dozen of individuals at the expense of the whole community.... The law that regulates the division of labour in the community acts with the irresistible authority of a law of Nature ; at the same time, each individual artificer, the smith, the carpenter, and so on, conducts in his workshop all the operations of his handicraft in the traditional way, but independently, and without recognizing any authority over him."[2]

Apart from the evidence of the Greeks regarding the continuance of household communities, we have the testimony of Pānini who speaks of people living in the *gana* way and of the *ganas* being involved in a violent struggle between the upholders of the old way of life and those advocating a life based on private property. He also writes that all the propertied families *(kulas)* were against the *gana* type of life. The description given by the Greeks, like the observations of Karl Marx, could only relate to remote areas which succeeded in retaining the *gana* (gens) economy.

S. A. Dange considers that when the Āryans entered India they were in the stage of primitive communism and that the obscure *Satra* (labour) *yajna* depicts such a society. From a study of the *Shadanga*

---

[1] Even the Rigveda in several places mentions *bali* which later meant a portion of the produce of the land taken by the king. Rigveda I, 70, 91 ; V, 1, 10. We also get the term *bali-hrit* meaning tribute-collecting. Rigveda, VII, 6, 5 ; X, 173, 6.

[2] Karl Marx, *Capital* (Indian edition), Vol. I, pp. 262-63.

Kratu and *Devasatra* he is able to gather that there was a big communal fire, a common kitchen of the commune, a communal house, 'where were kept pots of milk, curd, ghee, corn etc.' that the commune was a very small unit just like the small hut settlements, that the main wealth of the commune (cattle) was specially protected in stone enclosures called *ashmavraja*, that some went to cut wood for the fire, the *duhita* milked the cows and sheep, the *samita* cut the beast for the meals, skinned it and put it on fire for cooking.[1]

Archæological evidence shows that the early-Āryan settlements were a jumble of houses with "poorly built walls."[2] We have other pieces of information to show that the Āryan settlements maintained a communal fire. As already observed in Chapter I, primitive and barbarian communities maintained a common fire ; for making fire at will in those days was not quite easy. Moreover, we possess archæological evidence of a tank-like Āryan structure belonging to a later period which could have served as an ablution tank or as a fire-pit. There was a communal house too for commual needs.[3] Still, it will be too much to assume that the Āryans, when they came to India, were in the stage of primitive communism. The early Āryan society could, at the most, have been a household or *gana* organization based on blood and dominated by a patriarch. In that society personal property may extend from ornaments, clothes, implements and weapons to flocks, herds and slaves. Many of the elements of private property had appeared, and with the appearance of the slave, the first split in society into the exploiters and the exploited had taken place. Yet land could have been cultivated and reaped by joint effort and the harvest enjoyed in common.

I am not satisfied that the Āryan invaders, who had reached the level of early Bronze Age culture and had learnt the art of agriculture, were still in the primitive communistic cultural level of the lower stage of barbarism ; they had crossed the lower and middle stages and were on the threshhold of the upper one. The portion of the Rigveda cited by S. A. Dange may relate to an earlier stage of Āryan society, memory of which still lurked, and the Greek testimony to less developed regions. The scale of the invasions, the metal equipment, the costly ornaments unearthed, and the difference in the equipment of the soldiers—horn-tipped arrows for the poor and metal-tipped ones for the rich, and metal axe for the chieftain—all suggest that private property in movables had established itself and disparity in wealth had found a place among the newcomers.

The early Āryans, at the time of their arrival, did occupy a lower level of economic development than that which had been attained by the Harappans and did retard the progress of the regions occupied by them. But it does not mean that the period of temporary setback (c. 1,500-1,000 B. C.) was one of stagnation. The Āryan culture got assimilated with the culture of the vanquished Harapans and others, and a new superstructure with elements of private property as the base was speedily emerging out. Unfortunately, the period is dark, and its study bristles with difficulties. But when we get a glimpse of the imported sapling and, later, a fuller view of the grown-up tree, we can be sure that the tree has been growing steadily during the intervening space of time in the new and congenial soil of the Punjāb and the Indo-Gangetic plain.

---

[1] Dange, pp. 44-5. [2] D. H. Gordon, p. 81. [3] Piggott, pp 267-68.

Agriculture

The Āryans had tamed cattle to provide meat and milk. Agriculture was developed as a natural sequence of the domestication of animals and made land one of the greatest means of production along with cattle and handicraft. With the growth of population, the demand for extension of agriculture increased. Hence, felling of forests to clear land for cultivation became a necessity. Vast jungles were cleared and the land was put under the plough with the help of the Sūdra slaves and Vaisya tillers. Agriculture became the main industry of the Āryans, the word *Ārya* itself meaning a cultivator. The following passage of the Rigveda shows that the newcomers had not forgotten the real significance of their name. "O ye two Asvins ! You have displayed your glory by teaching the *Ārya* to cultivate with the plough and to sow corn, and by giving him rains for producing his food, and by destroying the *Dasyu* by your thunderbolt."[1]

At first, land was dug and prepared with a hoe. After the taming of powerful animals like the ox, man hit upon the idea of shifting to the shoulders of oxen a part of the heavy burden of his toil. "The first step, perhaps, was to make a pair of oxen draw over a field a variant of the hoe that women had hitherto wielded—a plough. In addition to the plough itself, a yoke and harness had to be invented, by means of which the beast's tractive power could be imparted to it. Fortunately, the broad shoulders of the ox give purchase for the yoke without impeding the animal's movement or respiration."[2] Ploughs were used in India at an early period and changed farming from plot cultivation to agriculture, and welded indissolubly cultivation and stock-breeding. It relieved women of the most exacting drudgery, but deprived them of their monopoly over the cereal crops and the social status that it conferred on them.

---

[1] Rigveda I, 17,1, 21. [2] Gordon Childe, *What Happened in History*, pp. 80-81.

There are references in the Rigveda to the use of the wooden plough drawn by bulls, to the sowing of seeds in the furrows made by ploughing, to the cutting of the crop with the sickle, to the laying of it in bundles on the threshing floor, and to the threshing and final sifting by winnowing. Further, mention is made of channels into which water is led. The grain in the fields is called *yava*, which, in the later Samhitās means barley. Wheat should have been cultivated soon after the Āryans arrived in India, learning the existence and cultivation of that grain from the Harappans, even if the former had not known it before.

The following details concerning agriculture we get from the Rigveda :

"Fasten the ploughs, spread out the yokes, and sow the seed on this field which has been prepared. Let the corn grow with our hymns ; let the sythes fall on the neighbouring fields where the corn is ripe.

The plough has been fastened ; the labourers have spread the yokes ; the wise men are uttering prayers to gods.

The troughs have been prepared for the animals ; the leather string shines in the deep and goodly well which never dries up and the water is easily got. Take out water from the well.

Refresh the horses ; take up the corn stacked in the field ; and make a cart which will convey it easily. This well, full of water, is a *drona* in extent and there is a stone wheel attached to it. And the reservoir for the drinking of men is one *skanda*. Fill it with water."[1]

Artificial waterways, such as *kulya*[2] and *khanitrimā āpah*,[3] mentioned in the Rigveda, make it clear that some kind of irrigation system existed. "Wells artificially made are contrasted with springs. Such wells were covered, and are described as unfailing and full of water. The water was raised by a wheel to which a starp, with a pail attached to it, was fastened. These wells could be used for irrigation purposes when the water was led into broad channels."[4]

Agriculture began to be organised in a new way. War-captives, who previously used to be destroyed or set free, were now employed in the more settled vocation of agriculture under the close watch of the captors. Henceforward, slave labour was utilized in an ever-increasing scale.

---

[1] Rigveda, X, 101, 3, 4, 6 and 7. [2] Ibid, III, 45, 3. [3] Ibid, VII, 49, 2.

[4] Ibid., 1, 55, 8 ; X, 101,67 ; 102,11 ; VIII, 69,12 ; 72, 10 ; *History and Culture of the Indian People* (London, 1951), Vol. 1, p. 399.

Animal Wealth

Hunting seems to have played a considerable part in the life of the Vedic Āryans. The hunters used bow and arrow as well as snares and traps. There are clear references to the capture of lions in snares, the taking of antelopes in pits and the hunting of the boar with dogs. Occasionally, a lion was surrounded by hunters and shot to death. Birds were captured in nets stretched out on pegs. Buffaloes were shot with arrows. The invading Āryans are reported to have entered India with flocks of sheep, goats and pigs, and also herds of cattle. Wealth among the early Āryans was reckoned in cattle following the Indo-European tradition. As in all simple pastoral societies, the Āryan vocabulary is rich in names for every aspect of the herd—a cow with a strange calf, a cow barren after calving, a three-years-old ox etc. as among the Arabs for camels. The cows were milked three times a day, and castration of oxen was practised. Herding was carried out by a herdsman armed with an ox-goad. In addition to the domesticated animals brought by the Āryans, all those varieties of animals domesticated by the Harappans should have been available to the newcomers—different kinds of cattle, buffaloes, goats, sheep, camels and elephants. Moreover, besides the hunting and catching of a few animals mentioned in the Rigveda, the Āryans would have very soon become familiar with the wild animals known to the people of the Indus valley—the Indian bison, the rhinoceros, the tiger, the bear, the sambhar, deer of several varieties, the monkey, the hare and a large number of birds. Peacocks and fishes are represented on the early Āryan pottery. The domestication of several kinds of animals and the breeding of herds and flocks should have given the Āryans unsuspected wealth and created entirely new economic relationships.

House Building

The Āryans destroyed the Indus valley towns, but they themselves did not construct any new ones for several centuries. They ushered in the Dark Age (archæologically) from which few buildings and inscriptions survive. The conquerors occupied the Harappan site after the fall of the citadel. Remains of their squalid hutments cluster on the summit of the citadel mound. There are signs of some rough rebuilding of house walls with brickbats taken from other parts of the site ; and "other huts seem to have been made of some perishable walling, such as matting, roughly set round a rectangular brick floor, which in one instance was some 17 by 8 feet overall. These brick floors might also be interpreted as stances for tents, and at all events, they suggest rather a squalid and not very permanent settlement on the site. Fireplaces are an interesting innovation, sometimes roughly built into doorways or niches of ruinous house walls or made of rectangular or curved setting or bricks on edge."[1]

The Vedic Āryans lived in small hamlets which consisted of houses built near each other for purposes of mutual defence, surrounded by a hedge or other protection against wild beasts or enemies. Houses were mostly made of perishable materials. Wherever some walls have been left, they are of a very poor quality. We have to wait for several centuries to get the Āryans build with burnt bricks.

Pottery

The early Āryan ware is very good, hard and thin in different colours. The commonest form is a shallow bowl with a foot-ring, and allied forms are deeper bowls of varying sizes, some reaching considerable dimensions. There are small cups of similar profile and two kinds of beakers globular or conical. 'Squat pots' which merge into small bottles with small necks and feet have a bulbous body. The colour of the ware varies from grey to pinkish ; some pieces have a yellowish-buff colour.

The paint used for ornament 'varies from black through warm sepia to a reddish brown'. The technique is slack or sloppy. The ornament is in zones, but sometimes in panels and in the bowls the centre has either a *swastika* or an allied motif, above which zonal patterns run. Some of the vessels have, in the exterior, *swastikas*, angular spirals, chevrons, lozenges, triangles, stars of various kinds, stylized plant forms, ring-and-dot patterns in addition to "representations of cattle, goats, peacocks and fishes treated in a brilliantly decorative convention."[2] At Jhukar a remarkable pottery head rest was found which is gaily decorated and quite foreign to the Harappan culture. On the whole, early Āryan pottery is quite good and the technique of manufacture comparable to that of the Indus valley civilization.

Metallurgy

Before the Āryans came to India, they had contact with people like the Hittites and others who knew smelting copper. Further.

---

[1] Piggott, p. 222.

[2] Ibid., p. 233 ; see also pp. 216-18.

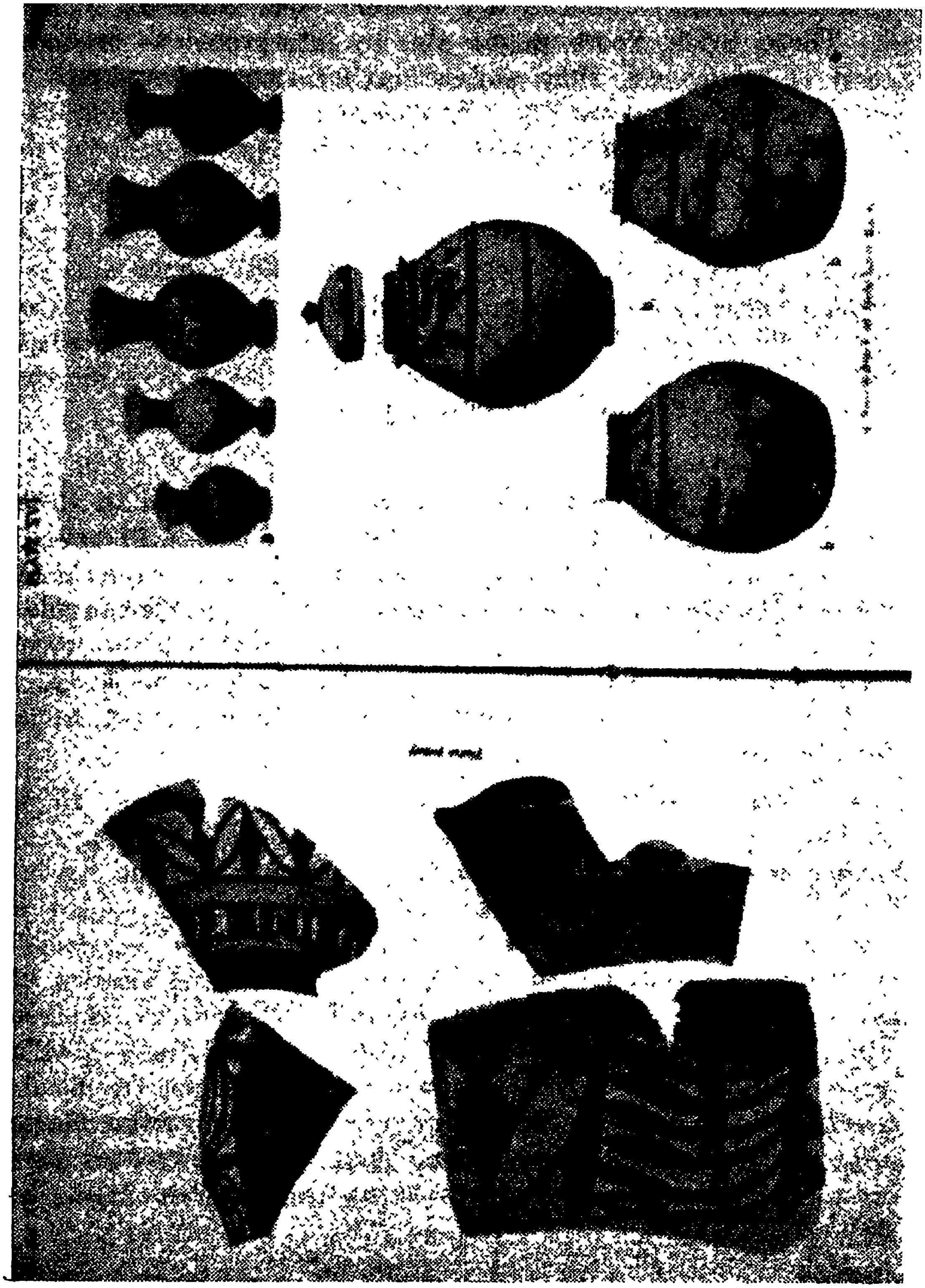

PLATE IX

Early Vedic Pottery

(D. H. Gordon, Plates XV and XVI).

the Indus valley people, whom they conquered and presumably made a part of themselves, had known and parctised the art of smelting. Hence, we can safely assume that the newcomers knew smelting.

The chief weapon of the Āryans was the bow ("With the bow let us win kine ; with the bow be victory in our hot encounters"), and even this principal weapon could not always be supplied with metal-tipped arrows. Normally, arrows were tipped with deer-horn. "The arrow is feathered ; the deer-horn is its teeth. Well pulled and sent by the cow-leather string, it falls on the enemy. Wherever men stand together or separate, there the shafts reap advantage."[1] From other passages of the Rigveda we understand that metal-tipped arrows were also used, that those tipped with bronze were costly and employed by the rich only and that metal tipped arrows, when poisoned, were much appreciated.

"The arrow-smith with hard dry reeds and feathers from the airy birds, bronze for the tips, and glowing coals, seeks out the man who will pay him best."[2] We extol the arrow which is poisoned, whose face is of metal, whose stem is of *parjanya* (reed).[3]

In the grave goods excavated from Āryan cemeteries occur copper or bronze weapons and tools, such as a copper spearhead, 9 inches long, with no mid-rib, recalling the Harappan types, and a heavy copper axe with a shaft-hole, 1.2 inches in diameter, resembling the one used by barbarian chieftains in South Russia, who probably got it from Sumer. A similar copper shaft-hole axe has been unearthed at Jhukar and seven pins with the heads rolled over in a manner known in Sumer. According to Geldner, a heated *parasu* (axe), used for an ordeal, is mentioned in the Rigveda.[4] The five distinctive copper stamp-seals from Shāhī-Tump are even more pronounced in their western origin.

At Rājanpur, in the Punjāb, a remarkable bronze sword with an elaborate hilt of a type known in the Lūristān grave (c. 1,400-1,200 B. C.) and similar to other contemporary ones from the Caucasus, has been unearthed. In addition to this unique sword, thirteen copper swords of a different type with slight mid-ribs have been brought to light at Fathgarh in the upper Ganges valley. It is just possible that all the swords in question may be related to Caucaso-Persian styles of the late second millenium B. C. The Rigveda mentions the metal smith who may make metal vessels.

---

[1] Rigveda, VI, 75, 11.

[2] Ibid. IX, 3, 2.

[3] Ibid. VI, 75, 15.

[4] *Vedic Studies*, Vol. II, p. 159.

About these metal equipments we can be almost certain as belonging to the early Āryan invaders. Many other sites have been excavated with copper articles, but one cannot be sure if they belonged to the early peasant farming period, the Harappan days or the age of the early Āryans ; for earlier Indian influences are predominant.

Indian metallurgy, dominated by the Harappan influence, and incorporating many foreign and locally initiated new features, developed until we get a series of excellent copper and bronze weapons and tools about the 8th century B. C.—axes, barbed harpoons, spearheads, swords, anthropomorphic figures. Most of the axes have a butt slightly narrower than the edge, a feature quite distinct from those of the Harappan axes. The commonest kind of spear-blades called the Bithur type has a large barbed spear-blade with two and sometimes three hooked barbs just below it. There is one more type which has "a series of barbs, four to six on each side, spaced equally along the whole length of the blade."[1] The greater number of these harpoons are quite large and all "are well made weapons cast in mould, of a relatively advanced type with a strong midrib."[2] Some of the spearheads are unusually long. Seven objects termed anthropomorphic figures found at different sites were perhaps intended for hurling at the adversary. A bronze socketed celt from Kurukshetra, which cannot be dated much earlier than the 8th century, is free from Harappan influence and is unique in many respects. On the whole, by 700 B. C. Indian metallurgy, which had suffered a setback on the arrival of the Āryans, succeeded in regaining the lost ground and even in advancing ahead.

Arts and Crafts :

Āryan sites excavated are not free from stone implements, but they are few. A stone pestle, and a stone blade have been unearthed. Stone slings were used. There is mention of a stone pulley over a well to facilitate drawing water.[3] Grave-goods included stone beads and alabaster cups, a bead of ruby-like stone, marine shells, a necklace of lapis-lazuli, agate and onyx beads. Excavations at Jhukar have brought to light seals of pottery, faience, stone and metal which are totally different in their ornamental motifs from the well-known Harappan series. Gold was used for anklets, rings and neck-ornaments.

---

[1] D. H. Gordon, p. 135.

[2] Ibid.

[3] Rigveda, X, 101, 7.

Numerous bone awls have been brought to light. Mackay suggests that they were used for mat-weaving. "These unsophisticated tools stress the barbaric character of the Jhukar culture, which is already suggested by the hovels built among the ruins of the deserted town."[1]

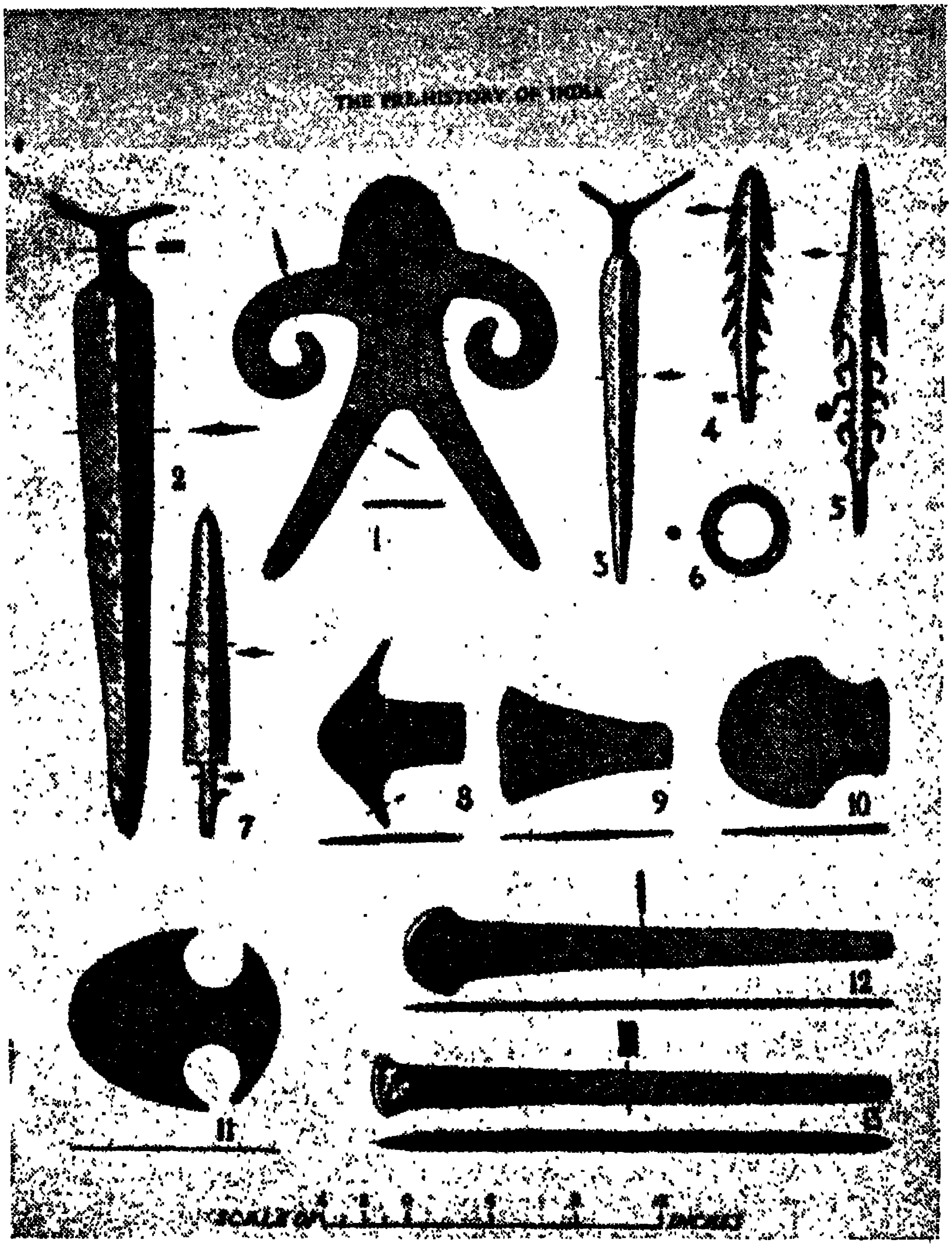

PLATE X

Copper and Bronze Articles, Late Vedic Period,
(D. H. Gordon, p. 136).

---

[1] Piggott, p. 225.

Leather was used for many purposes, such as slings, bowstrings, chariot-traces, reins and whips. "The leather guard protects the arm from the abrasion of the bowstring, and coils round the arm like a snake in its convolutions. It knows its work, and is efficient and protects the warrior in every way."[1] It is possible that shields and breastplates were also made of leather as among the early Arabs. Some sort of a tanning process and the wetting of the hide preparatory to stretching it are implied by references in the Rigveda.

Clothing was mainly of woollen cloth. Sheep's wool was mainly used, but there is evidence that goat's hair was also in use. We have already seen in the previous chapter that long-haired animals like those of Kashmīr were domesticated. The Rigveda mentions cloth weaving on a loom, of which the names of wrap, woof and shuttle are preserved.[2] In one place the weaving and bleaching of sheep's wool is attributed to Pūshan who is the god of shepherds.[3] In addition to weaving cloth, women practised sewing and the plaiting of mats from grass or reeds. "Clothes that were either embroidered or woven in ornamental patterns were worn by women, and a cloak or mantle worn, probably by both sexes."[4] There is mention of an ornamental headdress for women which stood up like a horn.

The carpenter of the Vedic period had an "important and honoured trade, working with an axe or adze and making fine carved wrok for chariots or to enrich the door-posts of a house. His equipment presumably included the bow-drill, the use of which is implied in the fire-making appliance with which the sacred (and also presumably the ordinary) fire was kindled."[5] The wheels of the Āryan chariots had spokes. The hole of the nave-hub, for smooth running, is mentioned. The felloe of the wheel used to be bent. "I bend with song, as bends a wright his felloe of solid wood."[6] Probably the felloe was a single piece, bent into the circular shape and held fast by the spokes.

Cymbals and drums were used to accompany dancing. Besides, "there were reed flutes or pipes, a stringed instrument of the lute class and harp or lyre, which is mentioned as having seven notes."[7] In addition to the musicians, there were poets, priests, physicians. The following beautiful piece from the Rigveda, perhaps the earliest known Indo-European pastoral poem, may enliven this section of our study :

---

[1] Rigveda, VI, 75, 14.

[2] Ibid., II, 3, 6 ; II, 3, (3 and 4)

[3] Ibid., X, 26, 6.

[4] Piggott, p. 269.

[5] Ibid.

[6] Rigveda, VII, 32

[7] Piggott, p. 270.

> "We all have various hopes and plans
> and many are the ways of men :
> The craftsman seeks for jobs to do,
> the priest his flock, the leech the sick.
> I am a poet, dad's a leech,
> and mother grinds corn on the quern ;
> As cows go following, one on one,
> we all seek wealth in different ways.
> The horse likes a light-laden cart ;
> gay hosts attract the laugh and jest :
> Man longs for woman, natural as
> the parched frogs longing for the rains."[1]

Fowlers and fishermen are not mentioned in the Rigveda ; but we can safely assume that they were there.

Trade and Commerce

There are distinct references to trading. There must have been considerable local trade and trading in distant lands for profit.[2] The exchange of commodities were principally on the basis of barter. The extractive industries, as we have already seen, resulted in exchange of commodities between distant places. There is one definite reference to haggling.[3] There is no clear indication regarding sea-borne trade. The construction of the boat was so simple that it could not have been seafaring, but the Vedic people seem to have been familiar with men 'going to the ocean *(samudra)* eager for gain'.[4] Soon after settling down in India, and getting sufficiently mixed up with the local population, the Āryans may have followed the line of communication with the West, by sea, initiated by the Kulli people and passed on to the Harappans.

It was most probably from the Tamil country, that during the reign of Solomon (about 800 B. C.) "once in every three years, the ships of Tarshīsh came bringing gold and silver, ivory, apes and peacocks." The names of the last two objects *kāpim* and *tuku*, as found in the Hebrew Bible, are the same as those still used in Tamil, i.e., *kāvi* and *tokai*. The country from which these articles came is given as Ophīr or Sophāra. Sophīr is the Coptic name given to South India.

Transport

Bullocks were used by the Indus valley people for transport, and we have models of bullock-carts unearthed. There are passages in

[1] Rigveda, IX, 3, (1, 3 and 4).

[2] Ibid., I, 50, 2.

[3] Ibid., I, 56, 2.

[4] Ibid., IV, 55, 6.

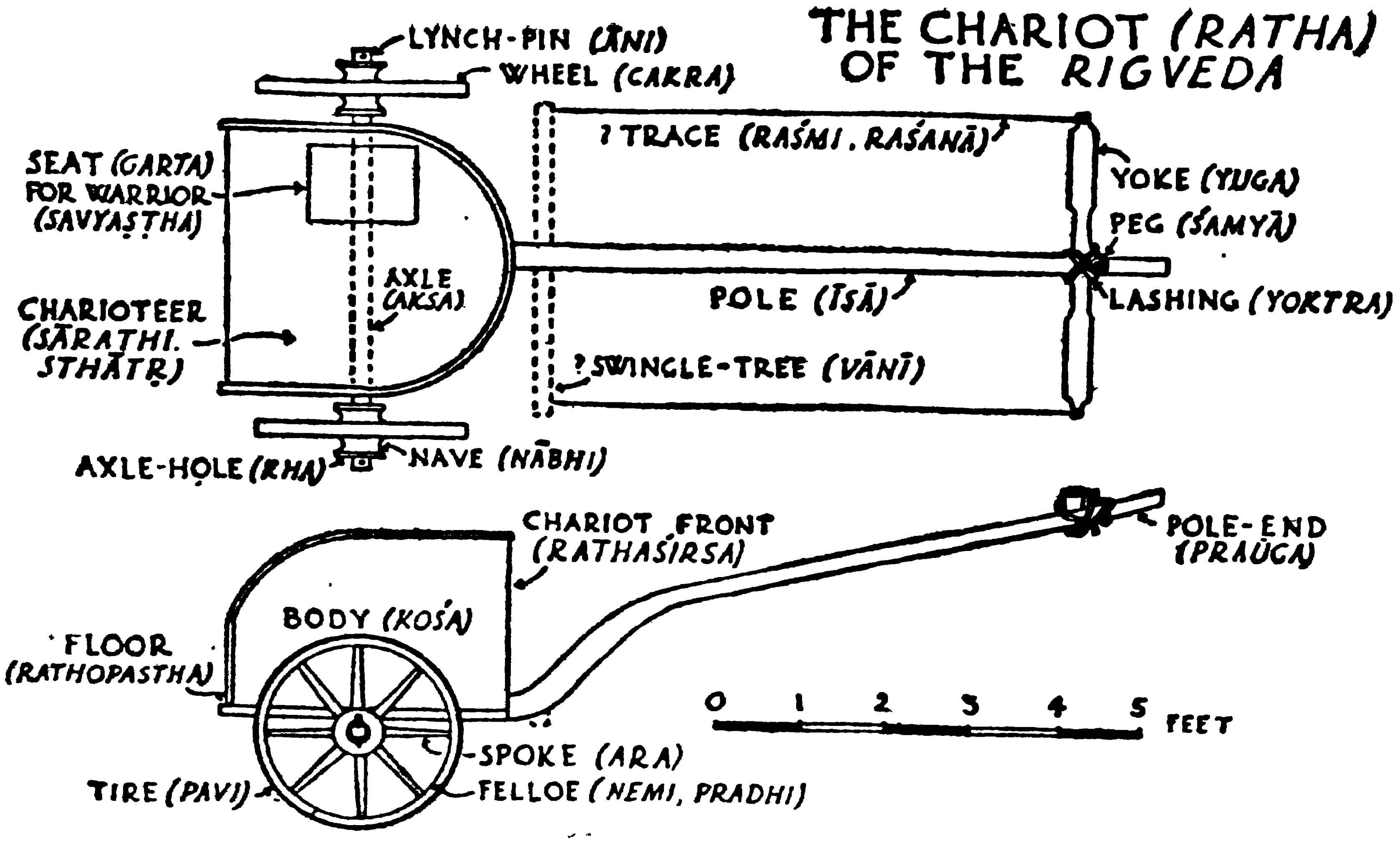

Plate XI

The Vedic Chariot.

(Piggott, p. 280).

the Rigveda which say, "Fasten the ploughs, spread out the yokes."...... The plough has been fastened, the labourers have spread the yokes."[1] Most probably the animal yoked was the ox. Piggott writes, "For their farm work, ox-drawn four-wheeled carts seem to have been used."[2] by the Āryans. There is evidence in the Rigveda to show that horses were harnessed to carts and used for carrying loads. The horse likes a light-laden cart."[3] "Refresh the horses ; take up the corn stacked in the field and make a cart which will convey it easily."[4]

The really characteristic domesticated animal of the Āryans was the horse which appears to have been domesticated by them in South Russia between 2,000 and 1,500 B. C. But domesticated horse was familiar to the Persians and Turks since very early times. We have already seen that it was known in Balūchistān and the Indus valley much before the arrival of the Āryans. "From the descriptions of the colouring of the horses in the Rigveda, Ridgeway concluded that these had chestnut heads and backs, shading off into dun on the lower parts of the body, in the manner of the wild horse of the steppes known as Przewalski's horse, and that they were of Mongolian or upper Asiatic stock."[5] We have full details of an Āryan war chariot which have enabled Stuart Piggott to reconstruct it.[6] The paintings recorded by Silberrard round Mānikpur in the Banda district of Uttar Pradēsh, which depict horsemen, archers, and a person seated in a cart, belong to this period.

Travel on land had been accelerated since the commencement of the Bronze Age by harnessing Asiatic asses and horses to light two-wheeled chariots. The harness employed was that already devised to control the ox. But, as horses, mules and asses do not possess broad shoulders, a breast band was employed and the burden of pulling transferred to the breast. It was only later that the horse-collar was invented. By the time the Āryans came to India, the strength of oxen, horses, and asses as well as the wheel had provided them with motive power and equipment for transport on land which were not superseded till the nineteenth century.

The use of boats for crossing rivers was known, but the simplicity of their construcion is adequately shown by the fact that the paddle alone was used for their propulsion. There is no mention of rudder, anchor, mast or sails.

---

[1] Rigveda, X, 101, 3 and 4.

[2] Piggott, p. 267.

[3] Rigveda, IX, 3, 4.

[4] Ibid. X, 101, 7.

[5] Piggott, p. 266.

[6] Ibid., pp. 279-81.

Slavery and Wage Labour

The writers of the Rigveda sang in exhuberance about the great happiness and pleasure that the slave gave to the owners. The prisoner of war saved his life by becoming a slave and the Āryan won a wealth-producing machine. They marched forward developing the productive forces which could now grow only through slavery. Craftsmen were often dependent on the merchants both for raw materials and for the sale of their products and such dependence often led them into indebtedness. The peasant too, if a harvest failed, or his crop was destroyed by a hostile raid, got into debts. The small merchant, who travelled abroad, often borrowed trade goods or capital from bigger merchants or capitalists who became sleeping partners in the profits. Insolvent debtors joined war-captives in replenishing the slave market.

About this stage of development the daily amount of work to be done by each member of the household community, or single family, increased. The most significant fact in the economic development of this period came about when farmers were persuaded or compelled to wring from the soil a surplus above their own minimum domestic requirements, and when this surplus was made available to support new economic classes not directly engaged in producing their own food.

Division of Labour

The earliest division of labour in the Āryan commune began when the various Ritvijas, who formerly were all one, became differentiated into seventeen categories, leading *yajna* labour in its various branches of production. But these divisions being occasional, they could not at first crystallize into *varnas.* But when Āryan tribal society advanced and inter-tribal contacts and exchange of surplus products of specialized industries began, a sort of permanent division of labour came about. Labour was divided among three *varnas.* The task of conduct of war and of protection was assigned to the Kshatriyas. Similarly, the task of observation of seasons, floods, rivers etc. and the direction of social (economic) effort devolved on some who became the Brāhmaṇas. The rest were the Vaisyas, the bulk of the community consisting of cattle breeders, handicraftsmen and agriculturists. As this division of labour was emerging out, slaves began to pour in. Thus there was not a perceptible gap between the birth of the first three *varnas* and the appearance of slaves—the Sūdra *varna.*

"In consequence of the separation of the social branches of production, commodities are better made, the various bents and talents of men select a suitable field, and without some restraint, no important results can be obtained anywhere. Hence both product and producer are improved by division of labour."[1] The division of labour and exchange reacted upon each other and together they developed production.

Money

The Āryans used cows and horses as standard money for purposes of exchange. With the spread of money (cows and later gold and silver by weight) economy, production for the market became common. Consignments were mostly collected, on commissions, of specific articles ordered by great households which were gradually acquiring the characteristics of states. Craftsmen, whether they manufactured for stock or only produced to order, could earn and purchase products of other industries. Eeven peasants sometimes found a market for their produce outside the great households. The new money economy became an instrument for concentrating wealth. Gold or silver was gained by usury, trade, plunder and manual labour.

Coinage

In pre-historic India cattle were used as currency. Among the Romans fines were exacted in cattle down to the end of the 5th century B. C. and the etimology of *pecunia* (money) from *pecudes* (cattle) shows that coined money took the place of cattle. The Greek *stater* and the Persian *daric* certainly, and the Indian *suvarna* possibly, were the value of a full-grown cow in gold, calculated by weight. With the passing of a pastoral civilization and the appearance of an agricultural community with its multiplicity of products, the need for some more convenient medium and for small change was felt. In China agricultural implements seem to have been used as currency before coins were struck, independently of the West, in the 8th century B. C. The earliest minted Chinese coins are models of the spades and bill-hooks which preceded them, with the addition of a proper coin-inscription showing that they were issued by authority. Small bronze celts appear to have passed on as currency in pre-historic Gaul. The most certain survival of this currency in the Mediterranean World is the iron or bronze spit.

With the invention of the scales, these clumsy currencies disappeared and we have the metal itself used ; a definite weight takes the place of a particular shape. This was the practice in most parts of the civilized world. The large oblong bronze pieces from Greece with a type on either side form a kind of transition from metal bars to coins. Smaller metal pieces of definite weights with a stamp of some kind guaranteeing its genuineness became the earliest coins in Greece and India.

---

[1] Karl Marx, *Capital*, Vol. 1, p. 359.

According to Herodotus, the first mint was probably the one established by Gyges in Lydia (Asia Minor) towards the end of the 8th century B. C. for coining of gold, silver and electrum, a natural alloy of gold and silver. The art of coining was introduced by the Greeks into Italy and other countries bordering on the Mediterranean and into Persia and India.

The advantage of a coin was that it did not require to be weighed every time it changed hands being stamped to indicate that the state or some other authority guaranteed its value. Gold, silver and electrum were used. Early coins were in the form of rings in Egypt and India. We have several references in the Vedas to *nishkas*[1] being given as presents. From the context it appears that they were ornaments of gold. Probably, they were gold coins in the form of rings, sometimes big enough to be worn round the neck.

Conclusion

The Āryans came to India about 1,500 B. C. During the centuries following that date we see the *gana* society breaking up gradually as a natural consequence of the development of the productive forces. The *gana* economy and its superstructure could no more hold the developing economic forces. Hence, its shell was burst asunder and the new individualist or primitive capitalist economy with its adjunct of a class society was born. The classes had to be controlled and peace established for the benefit of the possessing class and in the interest of economic and social progress. This brought about the armed state, the instrument to keep down the exploited classes and defend both the lower and the higher classes from external agression.

But the process was painful and bloody. There were struggles and wars within the *gana* itself, between one *gana* and another *gana*, and between all the supporters of the *gana* type of economy and society and the advocates of the newly born economy and its inescapable consequence, the state.

The state that was born was of two types, the monarchical type and the aristocratic type, but both of them had a heterogeneous population belonging to the most varied gentes and tribes, slaves, protected persons, and aliens living side by side with citizens. The population had increased until each man no longer knew every one he met. Encountering strangers became a common-place event.

---

[1] Rigveda, V, 136, 2.

By 700 B. C., the predominant economy in India north of the Vindhyas was one of classes under a state. There were islands with the old *gana* economy in which continued the partriarchal household community with common land-ownership and common tillage or in some cases such islands had already given way to the village community with individual cultivation and periodical re-distribution of areable and pasture lands. Besides, tribes with curious names of the *Ajas* (goats) and the *Sigrus* (horse-radishes) signifying their totemic non-Āryan origin and aborigines having large herds of cattle have been noticed in the Vedas. The aborigines could, when attacked, take refuge in fortifications called in the Rigveda by the name *pur*, which later denotes a town.

War, formerly waged only for revenge or to extend territory, was now waged simply for plunder and became a regular industry. The wars of plunder increased the power of the supreme military commander and the subordinate commanders. A man who distinguished himself as a 'war-chief', had a chance of consolidating his authority on an economic basis by means of his wealth in cattle and slaves as well as servants. If such positions of power and influence became hierarchical, the richest and highest would be like a king.

The customary election of the war-chiefs from the same families was gradually transformed, especially after the introduction of father right, into right of hereditary succession, first tolerated, then claimed, finally usurped ; the foundation of the hereditary monarchy was thus laid.

The victory of the slave-owners over the advocates of the old type of economy was followed by tremendous exploitation and economic development. Vast tracts of land were brought under cultivation and for the first time boundaries of territorial states came into existence in which not only the Āryans lived, but also aliens, such as the Nishādas and the Suta-Māgadhas.

The state is by no means a power imposed on society from without. Rather, it is a product of society at a particular stage of economic development. It is the admission that a particular society had involved itself in insoluble self-contradictions and is cleft into irreconcilable antagonisms which it is powerless to exorcise.

To summarise the achievements of the Āryans during the period of savagery and barbarism, in one word, pre-history, the art of making fire at will with all its attendant results and powers had been learnt. One Angiras or the Angiras gens (the common ancestors of the Āryans) is credited with the ability to produce fire at will. The Āryan had come to live in fixed abodes. He had devised many tools which were his aids in exploiting nature—the spindle and distaff, the loom, the crude tools of the primitive stone-chipper, the smith and the carpenter, the wooden hoe and the plough (which is the former fashioned in a particular way) and various weapons to protect himself against man and beast. Most of the common domestic animals of India had already been rendered subservient to man, and agricultural operation on a well-developed scale had appeared. Inland trade had fairly established itself. Art, symbolic and realistic, was in practice. Language was well advanced, as seen in the Vedic literature, even if actual writing had not yet been common. Private property in movable wealth and to some extent in land along with its adjuncts, slaves, masters, classes and class antagonisms had emerged. The foundations of class control through the state were laid to moderate class antagonisms and prolong the life of, if not perpetuate, the advantage of the ruling class and help society advance from stage to stage.

CHAPTER IV

EMERGENCE OF PRIVATE PROPERTY AND THE KING

(The Iron Age) **1,000—500 B. C.**

According to Frederick Engels, the sixth stage of pre-historic economic development commences "with the smelting of iron ore and merges into civilization with the invention of alphabetic writing and its utilization for literary records."[1] This is the stage with which we are now concerned. The Iron Age got itself established in certain countries about 1,000 B. C. As for India, especially South India, we can be sure that it began not later than 700 B. C.

We have already noticed that about 2,000 B. C. the principal centres of dense population in India—the Punjāb, the Indo-Gangetic plains, the regions watered by the Godavāri and the Krishna, the Sabarmati basin and the extreme South fertilized by the Kāvēri, the Vaigai and the Tāmbaraparni—had attained the culture of the Bronze Age. According to N.S. Vavilov, the famous scientist of the U.S.S.R., rice cultivation began in India much earlier than in China, and the knowledge of that art reached the latter country by way of the Yangtze about 2,000 B. C. Thus at the time wheat and barley were being grown by the Harappans, the people of the South had been growing rice for several centuries, and agriculture in its train would have brought in all those features which were peculiar to that economic stage.

We shall not be far wrong, if we assume that, by 2,000 B. C., many parts of India had domesticated animals and learnt the art of cultivation and of smelting copper and other soft ores. But the Indus valley people had outstripped the people of other Indian regions in town-planning and all that it implied, and the South, with its limited supply of copper ore, appears to have lagged behind in its copper equipment. Very few sites have been excavated in the South, and future excavations may possibly prove that even in this respect the South was not much behind the North.

The Āryan invasions held back the Harappan steed which was galloping ahead of the cavalcade and allowed the laggers behind to catch up. The Āryans came about 1,500 B. C. ; and the amalgamation of the old inhabitants and the newcomers and their combined resurgence could have taken about half a millennium in those days of racial isolation and tribal insularity. By then the other advanced regions of India would have progressed enough to vie with the people of the Indo-Gangetic plains.

---

[1] Engels, p. 39.

In pre-historic days, people burying their dead in stone kistvaens[1] and dolmens[2] lived in many parts of South India. Pyriform earthen tombs of the ancients have also been found in several places.[3] The *Mahābhārata* mentions the Pāndya king. The Rāmāyana speaks about the gates of the Pāndya capital which were richly embellished with gold, pearls and gems. The Singhalese chronicle *Mahāvamsa* states that Vijaya, the first king of Ceylon (a Pāndya prince) landed in the island on the very day of the *nirvana* of the Buddha in the 5th century B. C. The tribal society of Southern India, with communal property, seems to have been disrupted by internal conflicts and this appears to have led to incessant wars between the tribal chiefs. Out of these antagonisms and clashes private property was born and with it the various kingdoms of the South. The *sangam* literature is of a much later date ; but it should have taken several centuries for the culture depicted by it to develop. The classical Greco-Roman writers give us some details abut the Pāndya kingdom, its ports, industries and articles of export.

Although we can assume, that several areas of India, like many other regions of the world, progressed slowly and attained uniformity at several stages in the course of their economic development, it cannot be said that each and every region or area of India had been marching, hand in hand, throughout the ages. Up to the stage, in which pottery was discovered, a certain amount of uniformity in the cultural level with minor variations due to climatic and other natural factors may be assumed. Thereafter, the development was not uniform. In spite of it, after the lapse of each great period covering a significant economic stage, we observe a striking similarity in the economic base as well as the superstructure, stressing the essential uniformity of the nature and character of mankind.

---

[1] Constructions walled in on all four sides and floored and roofed with slabs of stone.

Box-shaped construction opening at one side and made of roughly dressed slabs.

[3] Francis, *Madura District Gazetteer*, I, pp. 25, 247-48.

In the course of the economic development, within a specified short period, we observe several ups and downs. The development is not uniform ; its course is zig-zag and wave-like ; certain areas advance ahead while others lag behind ; often the advancing wave is checked, and sometimes it recedes back. Some isolated spots on the tops of hills, or inside thick forests, or surrounded by extensive marshes or inaccessible deserts cling on to the earlier economic order.

When the Āryans came to India, there was personal possession among them in the shape of movable valuables and weapons. Slaves, cattle, horses, and other animals probably belonged to the family and not to the individual. The benefit obtained by employing other men to work for one and the haughtiness generated by the treatment of slaves degenerated man, and he started taking advantage of the weaknesses and calamities of his own kith and kin to subordinate and utilize them for his own gain.

Bhīshma attributes the fall of the old society to the rise of new passions and desires among the members of the *gana*. They were overcome by *moha* (attraction or delusion) for things, lost their power of discrimination ; then greed seized them. With greed they began to think of acquiring what they had not. In the clutches of new desires, anger, passion and hatred arose. They forgot their blood relations and blood duty, did what they should not, lost their *dharma*, fought among themselves".[1]

We can infer from the Drona-Karna incident that even before the Mahābhārata war, the two principal sections of the exploiting class —the Brāhmanas and the Kshatriyas—were involved in a serious conflict over their respective share of the wealth produced by the mass of the Vaisyas and the Sūdras and appropriated by the upper class. While fighting among themselves for power and pelf, the upper classes appear to have retained their class-consciousness and joined hands in keeping down the producers of wealth and exploiting them—the Brāhmana with the weapon of his knowledge of the sacred lore, magic etc. and the Kshatriya with the naked sword.

With the appearance of a propertied class, a fresh set of production-relations emerged and with them antagonisms not previously known ; and in the many sanguinary wars (including the Mahābhārata armageddon) of which we have the accounts of only a few, thousands of Āryans were killed, vast property destroyed, fields laid waste, entire villages set on fire and prosperous villages razed to the ground. Neglect of arable land should have resulted in the deterioration of the soil. Wars should have affected handicrafts, and production. Taxes should have been raised to meet the expenses of wars, commodity prices ought to have soared high. The old economic structure was shattered by violent clashes between the antagonistic forces. A new one took its place, and consequently a new social structure to correspond to the new production-relations sprang up.

---

[1] *Mahabhārata*, *Sāntiparvan*, Chapter 107.

Many farmers did not return from the wars. They were either killed, maimed or taken prisoners. Their land was sold or mortgaged by their heirs. Others came to ruined farms which they could not rebuild. Some moved on to larger villages to seek new means of livelihood. The small farmer found himself in great difficulties both during the wars and during the post-war reconstruction. The rich found great opportunities. They consisted of war-chiefs, large landowners, and those who amassed wealth through money-lending, trade and war business. They put some of their wealth into land for prestige, since the importance of a man among primitive people, and still among the rural population, was determined by the area of the land owned by him. The money-lenders and other richmen bought land from the ruined peasants at cheap prices, kept or misappropriated pieces of public land which had come somehow under their possession. In addition, there were profits to be made when public works were undertaken by rulers, princes or big estate owners. Possessors of big patches of land expanded their estates in the course of generations.

Big estates sprang up. A large one built up out of small holdings might carry what was left of its old population and be worked out by tenants and slaves. In many cases big holdings were often exploited as one unit. The wars which killed many Āryan freemen brought in a swarm of slaves. Tenant farmers tilled small holdings, but in big estates gangs of slaves did the work under the supervision of guards who were often slaves of approved loyalty.[1]

The development of the forces of production, and the consequent division of labour, led to production for exchange, and exchange, in its turn, broke down the old way of appropriation. Private production and private appropriation meant private property. Exchange created money (though not coined money) and money facilitated accumulation. Kinship gradually allowed territorial affinity to run side by side with it. The old exclusive society gradually admitted clients, strangers and unattached individuals. The sight of new faces and meeting unfamiliar persons became a feature of the new society.

---

[1] *Jātaka*, I, 504 ; V, 412 seq ; also see A. Bose, *Social and Rural Economy of Northern India*, Vol. I, pp. 22-23.

Society was rent into antagonistic classes—owners and slaves, masters and servants, exploiters and expolited. To oppress and keep down the exploited masses and to keep the greed of the exploiters within such limits as to allow the barest sustenance for the exploited in order to prolong, if not perpetuate, exploitation, or in other words, to moderate the class conflicts, a powerful armed state was necessary ; and such a state had been gradually evolving with the evolution of private property first under a tribal chief, then a kinglet and finally under a king or an aristocracy. In the period of the *Sūtras*, we cannot consider any kingdom to have been much larger than a modern district or two.

Governorships offered opportunities for extortion. Public domains in the sub-divisions of the kingdom were the public land, forests, mines, quarries and fisheries. Their exploitation was leased to individuals or groups who could bid high or stood in great official favour.

The avaricious priestly class had converted religion into a series of sacrifices, the economic motive behind which is gracelessly exhibited in the rules concerning the fees for conducting each sacrifice. "The priest performs the sacrifice for the fee alone, and it must consist of valuable garments, kine, horses or gold ; when each is to be given is carefully stated. Gold is coveted most, for 'this is immortality, the seed of Agni,' and therefore peculiarly agreeable to the priest."[1]

Men, who earned by means other than farming, invested large amounts on land and built up new big estates. Through the confiscation of some lands in the conquered territory, the king acquired the habit of owning large public domain which he often parcelled out by gift or lease to private individuals. Thus by the middle of the first millennium B. C. private property in land was established as the general rule, and thereafter small estates tended to grow bigger and bigger (*mahāgrāmas* and *mahāsālas*).

The ruin of the farmers and their reduction to landlessness made the majority of them land-labourers and the Ārya-Vaisya was degraded to the economic level of the Sūdra. The Āryan power, due to the mutual extermination of the Āryan groups, was on the decline, and the Nāgas attacked them repeatedly. Subsequently, with the foundation of an all-India empire, local warfares became scarce, the influx of slaves from the battle front decreased and the price of slaves soared up. Slave labour became economically inefficient and, in a way, unnecessary when cheap Vaisya labour was available at hand.

---

[1] Hopkins, *Religions of India*, p. 192.

The wealth of rich men consisted in gold, silver and jewels ; in chariots, horses, cows, mules and slaves ; in fertile fields and even in elephants.[1] Private property and exploitation had the sanction of the state behind it. If there was no king, in theory, there was no exploitation. Interest on money lent ceased to acrue on the death of the king and until the coronation of the next one.[2]

Guarding of private wealth by the state became so important that, according to the *Dharma Sāstras* of Gautama and Āpastamba, it was a fundamental duty of the king to restore or make good the stolen property. If stolen property was not recovered, the king should pay its value out of the treasury. There is a trace of police officials *ugras* in a passage of the *Brihadāranyaka Upanishad.*

With the emergence of private property very cruel laws to protect it also came into existence : "They bring a man hither whom they have taken by the hand, and they say : 'He has taken something, he has committed theft. Heat the hatchet for him'. If he committed the theft, then he ... grasps the heated hatchet, he is burnt, and he is killed. But, if he did not commit the theft, then he ... grasps the heated hatchet, he is not burnt, and he is delivered."[3] In effect, this meant that, if a man was charged with theft, he was put to death. Gautama[4] implies and Āpastamba[5] expressly states that a king shall personally strike a thief with the cudgel carried by the latter. If the king pardons him and does not slay him or strike him, the guilt falls on the king.[6]

Rules for the inheritance of private property occur *for the first time* in the *Dharma Sūtras. Sapinda* (those related within six degrees) males were heirs in default of near relations like sons, and *sakulyas* (remote relations) inherit in default of *sapindas.* According to Āpastamba, a daughter inherits only in default of a son, teacher or pupil. The king inherits in default of any of the categories mentioned above. The word *dāyāda* for 'heirs' is used in a technical sense in the *Sānkhāyana Srauta-Sūtra.*[7]

The simple division of labour in the Rigvedic Age developed by the end of the *Sūtra* period into a gradation of society of four classes one over the other (in theory), but of only two classes—that of the exploiting Brāhmanas and Kshatriyas and. that of the exploited Vaisyas and Sūdras, with discrimination in all walks of life. If a Brāhmana committed a henious crime, he was branded and banished by the king. If a man of a lower caste committed it, he was punished with death and the confiscation of his property. The punishment for killing a Brāhmana was death, for killing a Kshatriya, Vaisya or Sūdra was a fine of one thousand, one hundred, and ten cows respectively.[1] The same iniquitous distinction pervades the rules for all other offences.

---

[1] *Chhāndogya Upanishad,* V, 13, 17 and 19 ; VII, 24 ; *Satapatha Brāhmana* III, 2, 48 ; *Taittiriya Upanishad,* 1, 5 and 12.

[2] Vasishtha, II, 49-50.

[3] *Chāndogya Upanishad,* VI, 16.

[4] Gutama, XII, 43.

[5] Āpastamba, 1, 9, 25, 4.

[6] Gutama, XII, 45.

[7] *Sānkhāyana Srauta-Sūtra,* XV, 27, 3.

Thus, by 500 B. C., private property had clearly emerged out and with it class distinctions and the state in the person of the king, who kept down the exploited classes and moderated the tyranny of the exploiting class.

Agriculture

During the period covered by this chapter we encounter for the first time the iron ploughshare drawn by cattle, "making possible cultivation on a wide scale—*field agriculture*—and, in the conditions then prevailing, a practically unlimited increase in the means of sustenance ; in connection with this we find also the clearing of forests and their transformation into arable and pasture land, which again would have been impossible on any considerable scale without the iron axe and spade. But with this there also came a rapid increase of the population and dense population in small areas. Prior to field agriculture only very exceptional circumstances could have brought together half a million people under one central administration ; in all probability this never happened."[2] All the followers of Indra, the war god of the Āryans, counted only 'sixty thousand nine and ninety' according to the Rigveda.[3]

Agriculture was the chief occupation of the Vaisya class which had, even as early as the period of the *Brāhmanas*, got so much declassed as to be considered that its member was one "to be lived on by another and to be oppressed at will."[4] A servant in tillage, who abandoned his work, was to be flogged.

Rice, both domesticated and wild, was much is use. Ten kinds of seeds are mentioned in the *Upanishads*,[5] viz., rice (*vrihi*), barley (*yava*), sesamum (*tila*), kidney beans (*māsha*), millet (*anupriya*), panic seed (*angaya*), wheat (*godhuma*), lentils (*masūra*), pulse (*khalya*), ventches *(khalakula)*. In the White *Yajur Veda*[1] we get three more grains—mung beans *(mudga)*, rice growing wild *(nīvāra)* and *panicum frumentaceum (syāmakara)*. Mustard seed is also mentioned during the *Sūtra* Period. The *Vamsādi Gana* of Pānini mentions sugar-cane *(ikshu)* as one of the crops. Cucumbers are alluded to even in the *Samhitās*.

---

[1] Āpastamba, 1, 9, 34, 1-4.

[2] Engels, p. 40.

[3] Piggott, p. 261.

[4] *Aitareya Brāhmana*, VII, 29, 3.

[5] *Brihadāranyaka Upanishad*, VI, iii, 13.

According to various texts of the *Samhitās* and the *Brāhmanas*, six, eight, twelve and even twenty-four oxen were used to drag the plough which must have been large and heavy. The plough is described as having a smooth handle, well-lying and lance-pointed *(paviravat)*. There is a special term *kinasa* for the ploughman or cultivator of the soil. Dung *(skrit)* and dry cow-dung *(karīsha)* are often mentioned as the manure.

The seasons of the different grains are briefly summed up in the *Taittiriya Brāhmana* : barley sown, as at present, in winter, ripened in summer ; rice, sown in the rains, ripened in autumn ; beans and sesamum, planted in the time of the summer rains, ripened in winter and the cold season. There were two seasons of harvest according to the same authority ; and another text tells us that the winter crops were ready in March. The farmer had, as now, constant troubles to contend with : moles destroyed the seeds, birds and other creatures injured the young shoots ; and both drought and excessive rain were feared.

The fact that there is a domestic rite synchronizing with each stage in the agricultural life of the people of the *Sūtra* period and practically none associated with urban life, shows that the Indians of those days ware mostly agriculturists living in villages and that urban life had not attained any significant growth up to the end of the *Sūtra* period. The *grāmani* (head of the village) belonging to the Vaisya caste is referred to in the *Taittiriya Brāhmana*.

Much care seems to have been taken to see that agricultural lands were not neglected. If a person who had taken a lease of land, did not exert himself, and hence the land bore no crop, he should, if he were rich, be made to pay the value of the crop that ought to have been grown. If damage was done to the crop by cattle, the herdsman or the owner was held responsible.

Cattle

Draft-oxen were generally castrated. Female draft cattle were also used. There was a special term for a cow with a calf substituted for one of her own which had died. Pasture-lands were carefully looked

---

[1] *White Yajur Veda*, XVIII, 12.

PLATE XII

section of the fort wall of Ajātasatru.

after, and large sheds or stalls were erected for accommodating cattle. Cattle were very much desired as an invaluable possession. "Make us rich in cows"[1] was the main theme of all supplications. Brayers and rites for prosperity in cattle and their good health abound in the *Griha Sūtras*. There is a ceremony for cattle breeding called *vrishotsarga* on the release of a stud-bull among the cows. *Yakshma*, a wasting disease affecting cattle, was very much dreaded.[2] It was a custom to brand the cows. If a herdsman left his work, he was to be flogged, and the flock entursted to him should be taken away. If a herdsman, who had taken cattle under his care, allowed them to perish or get lost, he should replace them to the owners.

Building

The buildings of this period in the areas occupied by the Āryans appear to have been of wood, "and the house seem to have been rectangular with a thatched roof, divided into more than one room."[3] The standard of house building during the Vedic and Epic periods must have been extremely poor. The remains of Bhīr Mound, Taxila, one of the most advanced centres of this period are "but an assemblage of undistinguished houses" and the town itself is very badly laid out. "Those that are certain that the rulers of the pre-Saisunāga days lived in resplendent places must console themselves with the belief that they were made of wood, as nothing survives to bear witness to their departed glory."[4] Sankalia, after declaring that the great kings and warriors of the Purānic tradition must be placed in the Copper Age setting, for there is no archaeological evidence of the use of iron by the Āryans before 500 B. C., states : "Such an interpretation of the Purānas in the light of archaeological data would without doubt shock many of us, as it runs counter to our cherished dreams of the Purānic Age."[5] The only monument of this period which survives is the fort wall of Ajātasatru built of heavy boulders. For how long that wall had stood there before Ajātasatru, it is not possible to ascertain. This wall at Rājagriha, present Rajgīr in Bihār, has a circuit of about 25 miles along the crest of low hills which surround the site of that city. The wall, about 12 ft. thick and 10 ft. high, is faced with rough massive blocks in dry-stone walling and has occasional salient bastions. The most ancient outer wall may date back to the 6th century B. C. as it is without doubt the wall of the capital of Ajātasatru.

---

[1] Rigveda, 1, 70, 91 ; V, 1, 10 etc.

[2] Ibid, VII, 6, 5 ; X, 173, 6.

[3] Piggott, p. 268.

[4] D. H. Gordon, p. 127.

[5] Sankalia, *Excavations in the Narmadā Valley*, p. 114.

Pottery

During the early half of the first millennium B. C. Indian pot-making had advanced considerably. In spite of certain common features in the ware unearthed from different parts of the sub-continent, each region appears to have developed independent types, although the pottery from known Āryan regions has a certain amount of uniformity.

The pottery of this period is a coarse ware, mostly plain, and where it is painted, the ornament usually employed is a continuous band of large volutes or pot-hook spirals. The pot type peculiar to this group is a spouted flask with lugs pierced for a carrying cord. Pottery, called Londo ware by Miss de Cardi, is a red ware with a rather thin slip and is recognisable by its special style of decoration in black paint and the fact that it is tempered with finely crushed terra-cotta. The people who used this ware were horse-riders for horse skulls were found in two of the cairns at Zangian, and on Londo ware horses appear on sherds from certain sites. D. H. Gordon is of the opinion that this pottery should be assigned to the period 650-450 B. C.

The painted pottery found at Jorwe is wheel-thrown and mostly consists of small bowls having a shallow rounded bottom and slightly concave sides. The slips used are red, orange, russet, tan and purple. The decoration is usually in black. In addition to the bowls there are high-necked jars and pots with tubular spouts. Along with these painted ware we get ordinary ware of South Indian Neolithic type. The painted pottery discovered at Nevesa is black-on-red and is primarily decorated with simple linear patterns.

Painted grey ware from Ahichchhtra in the Bareily district of Uttar Pradēsh is a pottery fabric grained and fired to a uniform shade of light grey with a glossy slip surface in various shades of grey. The pots are chiefly wheel-thrown and are decorated with painted designs in black. Such are the wares discovered at Hastināpura and Rupar (above a post-Harappan occupation). The decoration includes groups of vertical lines, bands of sigmas, concentric circles pot-hook spirals and arrangements of dots and dashes. "The country of the East Punjāb between the Sutlej and the upper Yamuna is full of sites producing painted grey ware and from Krukshetra to Tilpat, sites containing this ware are those traditionally associated with the Mahābhārata."[1]

---

[1] D. H. Gordon, p. 141.

Metallurgy

Iron was found in meteorites as early as 4,000 B. C. and was known as the metal from heaven. Much later, the metal, procured from the earth was brought into use. The process of producing in bulk iron of good quality was perhaps first invented by a barbarian tribe living among the Armenian mountains in what the Hittites called Kizwadana. Shortly before 1,200 B. C., the Hittite power fell and the iron workers, who were dispersed, found their way to Syria, Egypt, Asia Minor and some other countries. From that time the use of iron for making tools or weapons spread slowly. By 1,000 B. C. the Iron Age was well begun, but the smelting methods were so difficult that the output was very little.

"The Āryan rulers of Mitāni, who incorporated iron workers in their military monarchy appreciated the value of the new metal, and guarded the secret of its production and controlled the output in virtue of the normal state monopoly over the metal trade."[1] The Āryans who came to India appear to have had no immediate connection with the Āryans of Mitāni. The word *ayas* used in the Rigveda for a metal is qualified by the adjective 'reddish' which can only mean copper. From the archæological evidence it is certain that the Āryan invaders did not bring iron implements with them.

By 1,100 B. C. iron was replacing bronze on the Irānian plateau and appears in graves in Lūristān, especially at Sialk. But in spite of the fact that the people of Sialk at this level were capable of building the citadel of the *grand construction*, their burial deposits show a greater number of bronze than of iron weapons.[2] Since the 12th century B. C. bronze was being superseded by iron to such an extent that by 800 B. C. there was a full Iron Age throughout Eastern Europe and Western Asia. Copper and bronze were no longer economic propositions, and they yielded place to iron. Iron articles were by then being produced far more cheaply as well as in a large quantity, and it became possible now for those, who hitherto had to content themselves with stone, to possess metal tools.

Iron, unlike copper, is found in quantity all over India, particularly in the South, and it is unlikely therefore that iron or steel ingots were ever imported. In fact, the reverse was true and Indian steel earned an early reputation all over the ancient world. We know for certain that in the days of Ctesias[1] (about 400 B. C.) Iron and steel weapons were being exported to the markets of the Near East by the Drāvidians. On this basis we can assume their knowledge of iron smelting for a few centuries before that. But it may not be many centuries earlier. It will be safe to assumo that iron was in use about 700 B. C. in South and North-West India.[2]

---

[1] V. Gordon Childe, *What Happened in History*, pp. 182-83.

[2] Ghirshman, *Fouilles de Sialk*, Vol. II, quoted by D. H. Gordon, p. 154.

That metals, including iron, were used in South India and many other parts of the sub-continent by 700 B. C. is certain from the finds that have been collected by the archæologists. Further, the use of several metals in that region, including iron, is authenticated by literary evidence which is difinitely pre-Christian. In other parts like Bihār and West Bengal, where the metal is found in plenty, unsmelted lumps of good iron were picked up and beaten into shape, after heating, much earlier than iron smelting was known in Upper India.

The oft repeated assertion that the Āryans introduced iron into the Deccan is one that is unsupported by fact, there being not one single implement of iron as yet found north of the Narmadā and the Mahānadi which can be assigned to a date earlier than 450 B. C. The tanged fragment of iron found by Carlyle among the scattered stones of some old cairns on the slope of the hills near Visālpur suggests possibilities ; but so far none of the famous ancient sites of the North has produced any iron of pre-Sīsūnāga date.

There are a large number of data which indicate that iron was used in South India quite independently of the Āryans. Vast quantities of iron ore exist in the Salem district of Tamil Nād, in the Baba Budden Hills, Kadūr district (Mysore) and the Mayurbhanj state on the border between Bihār and Orissa. Ancient workings have been recorded in many places from Mangalam in Coimbatore district (Tamil Nād) to Sop in Kashmīr. It can be taken as certain that about 700 B. C. iron was being widely worked, especially in the South.

Excavation at Brahmagiri in Northern Mysore by Dr. R. E. M. Wheeler in 1947 showed that a megalith-building, iron-using people from the South invaded this area and dominated its people. The iron equipment of this people is characterised by long iron-shafted spears (found in Coorg, in Tamil Nād, and at Brahmagiri), iron-shafted tridents,

---

[1] Greek Physician at the court of Artaxerxes Mnemon, king of Persia (415-397 B. C.), and the author of *Persica.*

[2] Colonel Gorden, *Early Use of Metals in India and Pakistān.*

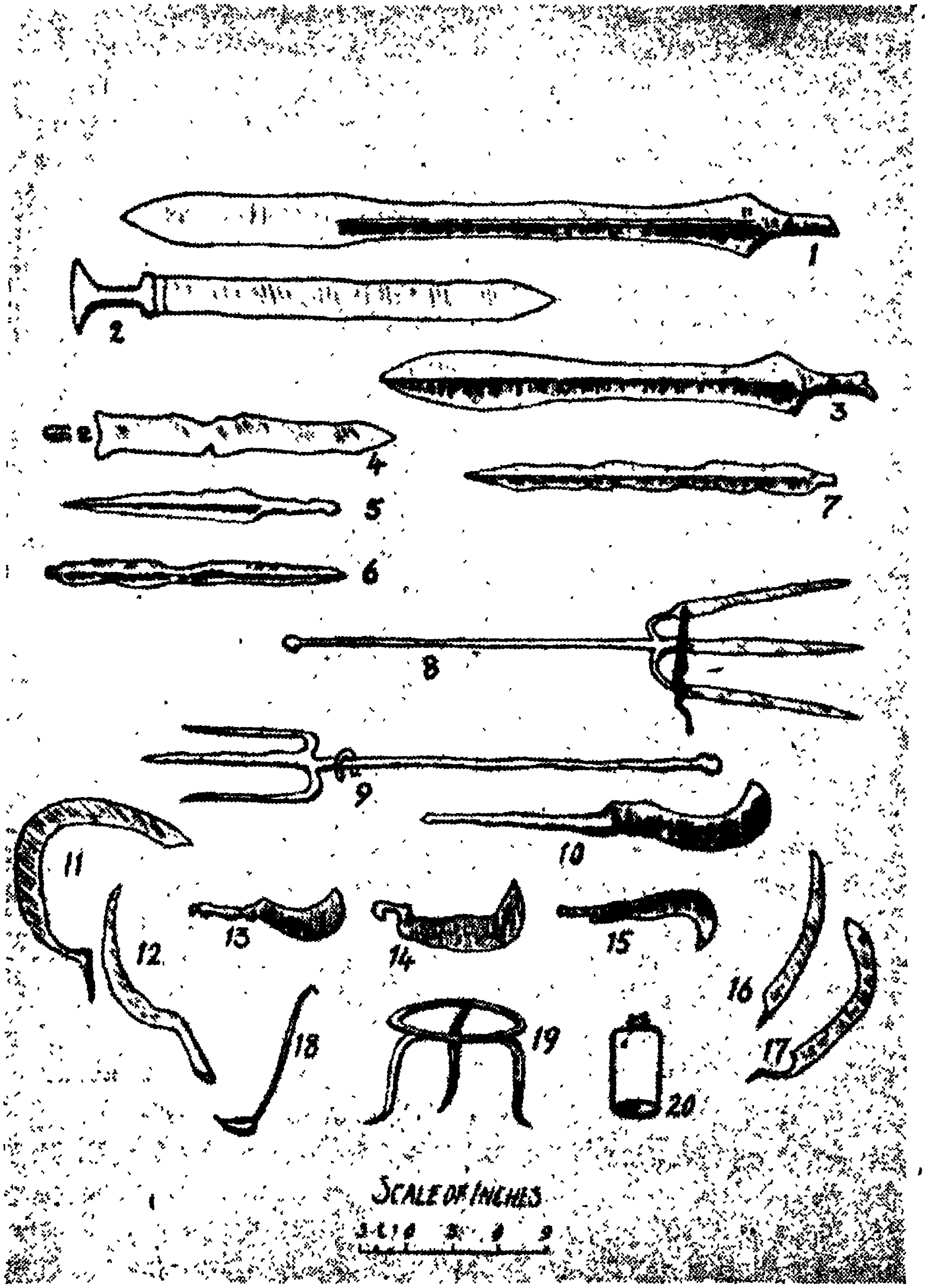

PLATE XIII

Iron objects from South India and the Deccan

(D. H. Gordon, p. 176)

hoes with iron ring fastener, hoes with sides turned in to form a socket, bill-hooks, saucer and hook lamps and iron tripods. In addition to these more peculiar objects, there are swords, daggers, sickles, arrow-heads, socketed spearheads and flat axes.

D. C. Von Furer-Haimendorf[1] has pointed out that the megalithic builders were the dominant race in many parts of the South at the end of the first millennium and that the present distribution of Drāvidian languages coincides largely with that of the megalithic graves. There are cist burials on the sandstone formation to the east of Nāgpur and in this direction one dolmen grave is known at Pipalgāon in the Bhandara district. These would appear to mark the northern limit of the Drāvidian culture of the South, the further advance of which was checked by the central forest and the Āryans of Vidarbha and Asmaka. Those who advanced were the Tamils, and those who checked their advance were possibly of the Āryan stock.

There is however evidence of another iron using people who came as far as West Pakistān. They were the people who left their traces in their cairn burials from Hazār Mardī in the Rūdbār tract of Eastern Persia to Mughul Ghundai on the Zhob. Wherever these burial cairns have been excavated, archæologists have found iron objects which seem to indicate a date in the earlier half of the first millennium B. C. "Iron was found by Stein in the cairns of Damba Koh, Gatti, Jīwanri and and Zangian (all in Balūchistān), and the iron swords at Zangian argue for a late date for the graves in which they were found which cannot be earlier than 750 B. C."[2] From the lowest stratum in the Garh-Kalik mound of old Ujjaini (c. 600 B. C.) iron weapons were brought to light as well as black-on-red pottery.[3] Stein found at Mughul Ghundai, tanged arrow-heads, including a three-flanged example, a bronze jar on three legs and a bronze bezel-ring having engraved on it a man with a headdress or helmet, carrying a bow and a spear and facing the figure of a woman. The ring could come within the period 650 to 450 B. C. "An outstanding discovery is a small adjustable bracelet of a well known type having tapering ends coiled round the ring of the bracelet so that they can slide freely and alter its size as required."[4]

[1] *Indian Megalithic Cultures—Ancient and Modern*, Illustrated London News, July 1st, 1950.

[2] Stein, *Archæological Rec. in N. W. India and S. E. Irān* and De Cardi *A new pre-historic ware from Balūchistān* quoted by D. H. Gordon, p. 156.

[3] *The Statesman* dated 9th August, 1958.

[4] Stein. *Archæological Tour in Wazīristān and North Balūchistān*, pp. 46-49; D. H. Gordon, p. 160.

It seems likely then that about 700 B. C. this iron using people reached Balūchistān and Sind. Apart from these two people—non-Āryans practising megalithic burial in the South and cairn burials in the North-West—we have no archæological evidence yet of the use of iron by any one in India before 450 B. C.

According to the literary sources, which are considered to be pre-Mauryan, there is evidence to show that iron was used in Northern India by the Āryans. The *Chhāndogya Upanishad* specifies some metals then in use : "One binds gold by means of borax (*lavana*), and silver by means of gold, and tin by means of silver, and led by means of tin and iron (*loha*) by means of lead, wood by means of iron and also by means of leather."

Ayas in the *Sūtra* literature is differentiated as red and black. Some hold that black *ayas* was iron while there are a few like Colonel D. H. Gordon who think that black *ayas* could have meant bronze which is darker in colour. There are no iron finds from the area occupied by the Āryans which can be dated earlier than 450 B. C. If at all the Āryans used iron before 500 B. C., the use of that metal must have been very limited.

"There is also the famous crucible steel known by the Telugu name *wootz*. There is much to suggest that the production of steel by the fusion method in clay crucibles was a process which had its origin in India. There must have been some outstanding quality that made the steel of the Chēras so desirable and the swords mentioned by Ctesias would not have attracted so much notice and admiration if there had been nothing remarkable about them. So far, it has not been possible to show that any of the iron objects unearthed in Southern India were of crucible steel, but keeping in mind the approximate date at which Ctesias saw these swords at the court of Artaxerxes Mnemon, it is likely that Indian iron smiths invented the *wootz* process early in the 5th century B. C. This process probably had some local variations, but from the descriptions given by Forbes and Hunt, quoting Ure and other early writers, the following seems to have been the method generally used. Crucibles of refractory clay were tightly packed with small pieces of iron blooms, together with charred rice husks, leaves of *asclepias gigantea* or *convolvulus laurifolia* and *cassia auriculata* as carburizing material. The crucibles were made air-tight and heated in a charcoal fire kept at a very high temperature for 24 hours by constant use of bellows. At the end of this time the crucibles were broken and cakes of steel weighing about 1½ lbs. extracted.

In order to render these malleable they were again covered with clay and annealed from 12 to 16 hours."[1]

Arts and Crafts

Woollen thread (*urna-sūtra*) is repeatedly mentioned in the later *Samhitās* and *Brāhmanas*. Cloths were generally woven of sheep's wool. The *Satapatha Brāhmana* speaks of a silk undergarment (*tārpya*) used for sacrificial purposes. The list of garments procured for the *upanita* or initiated body mentions cotton, woollen, linen and hempen cloths. The frequent use of the variant terms for 'warp' and 'woof' proves much development in the art of weaving. Woollen blankets were in use. Skins were also used as clothing. The skin of a deer or goat served as an upper garment. The sandal was of boar-skin. Cloths were dyed with saffron,[2] the juice of *lodhra* flowers, madder or indigo.

Among the jewels are mentioned pearls[3] (*vimukta*) which should have come from the extreme South. A metal mirror (*prakāsa*) often figures in the *Brāhmanas*. Implements and vessels of copper, iron and stone as well as earthen ware we come across in the *Sūtras*. Golden spoons and brass gongs were in use, and silver was known to the Sūtrakāras. Upper and lower millstones, mortar and pestle, cups, ladles, dishes, swords and spindles (*chatra*) are mentioned.

Hunting was practised for procuring food, for the protection of herds and flocks from wild beasts and also as a pastime. There were also professional hunters, fishermen and fowlers. Birds were caught in nets (*jāla*) and the net was fastened on pegs.[4]

From the *Prushamedha*, a symbolic human sacrifice, described in the *Vajasaneyi Samhitā*[5] and the *Taittiriya Brāhmana*,[6] we are able to make a list of the following professionals : the astrologer, the charioteer, the maker of bow-strings, the horse-groom, the elephant keeper, the attendant on cattle, the fire-ranger, the weaver, the dyer, the door-keeper, the ploughman, the hand clapper (to scare away birds from fruit-bearing and crop-bearing fields), the carpenter (maker of chariots), the smelter, the engraver, the smith, the jeweller or goldsmith, the drummer, the flutist, the wood-cutter ; the worker in thorns (cut up and used to plait mats and leaf containers), the cow-killer or butcher, the basket-maker, the brewer of *sura*, the hunter, the fowler, the fisherman, the seller of dried fish, the seasoner of food, and the professional acrobat. R. C. Dutt[1] has culled out the following additional professionals from the sixteenth and thirtieth chapters of the *White Yajur Veda* : the priest, the learned and proud man, the physician, the orator, the dancer, musicians of various kinds, warriors (horsemen as well as infantrymen), the arrow-maker, the bow-maker, the potter, the painter, the wig-maker, the washerman, the barber, the tanner and beggars (physically deformed men and people suffering from various diseases). In other texts of the period mention is made of the ferryman (pole-man), the boatman using oars, the money-lender, the labourer, the cook, the messenger, and the footman running by the side of the chariot. To this formidable list we must add such other professions as have been mentioned in the previous chapters. Among women workers, we learn of the dyer, the embroider, the worker in thorns and the basket-maker. Apart from these professions women also worked as plaiters, carders, spinners and occasionally as weavers.

---

[1] Forbes, R. J. *Metallurgy in Antiquity*, (Leiden, 1950), pp. 347-8 : Hunt, E. H., *Hyderābād Cains, Journal of the Hyderābād Archæological Society*, July, 1916, p. 211 ; D. H. Gordon, pp. 162-63.

[2] *Sānkhāyana Āranyaka*, XI, 4.

[3] *Shadvimsa Brāhmana*, V, 6.

[4] *Atharvaveda*, X, 1, 30 ; VIII, 8, 5.

[5] *Vajasaneyi Samhitā*, XXX.

[6] *Taittiriya Brāhmana*, III, 4.

Money-Lending

Money-lending was a flourishing business and the *Satapatha Brāhmana* called the ushurer *kusidin*, and *kusida* has the sense of a 'loan' in the *Taittiriya Samhitā*. According to Vasishtha,[2] the Brāhmana paid two, the Kshatriya three, the Vaisya four and the Sūdra five in the hundred per month if the loan was unsecured. No stipulation beyond 5% *per mensem* was legal. The only contracts known in the Samhitā period relate to money-lending.

Gold was lent, taking double its value at the time of re-payment, obviously after one year, and grains, flavouring substances, flowers, roots and fruits trebled the original price. The interest on products of animals, on wool, on the produce of the field, and on beasts of burden, could not increase more than fivefold the value of the object lent.[3] Thus, it appears that articles and products were lent at an enormous rate of interest. Gautama names no less than six different forms of interest, viz., compound interest, periodical interest, stipulated interest, daily interest, corporeal interest, and the use of the pledge property instead of interest.[4] Gautama lays down that the heirs shall pay the debts of a deceased person.

---

[1] R. C. Dutt, *Ancient India*, pp. 168-69.

[2] Vasishtha, II, 48.

[3] Gautama, XII, 36.

[4] Ibid., XII, 34 and 35.

Commerce

Rich Vaisyas (*sreshthins*), who had acquired wealth in trade, are often referred to in the *Samhitās*. The profession of the merchant was often hereditary. The haggling of the market, already known in the Rigvedic age, had now become such a pronounced feature of commerce that a whole hymn[1] aims at procuring success in trade through clever bargaining. In addition to the articles of trade mentioned in the previous chapters, garments, coverlets, and goat-skins figure in the *Atharvaveda*.

In the *Sūtra* literature the word *samudra* is used in the definite sense of the 'sea'. Probably there was some sea-borne trade. An export trade to the West by way of the ports of South Arabia and East Africa and with Babylon by way of the Persian Gulf developed even before 750 B. C. Some scholars are of the opinion that the Indian traders brought home from the West the *Brāhmī* alphabet as well as the knowledge of the lunar mansions and the Babylonian weights and measures. We have seen in the previous chapter that certain articles reached Solomon from South India as early as 800 B. C. Indian cotton, *sindhu* is mentioned in the tablets of the library of Assurbanipal (668-626 B. C.)

Coinage

No regular system of currency or coinage appears to have been introduced in the Samhitā period. We hear in the *Brāhmanas* of the *satamana*,[2] a piece of gold, in weight equivalent to a hundred *krishnalas* (ancient *manā* or modern *rati*), and such pieces of gold were more or less equivalent to currency and must have been used freely by the merchants. The *nishka*, which we have come across in the Rigvedic period, and which originally was a gold ornament, was also at this time a unit of value. The cow as a unit of exchange was probably in the course of supercession. Herodotus tells us that the Achæmenian emperors received 360 Euboic talents (more than twenty-thousand lbs.) in gold dust as annual tribute from their Indian province. It shows that even in the sixth century B. C. the dust or ingots of gold, calculated by weight, served the purpose of higher currency. We have extant specimens of Indian coins—ingots of silver marked with three dots or bent bars of silver with some symbols—which probably go back to the sixth century B. C., if not earlier.

---

[1] *Atharvaveda*, III, 15.

[2] A *satamana* weighed one modern *tola*.

Transport

Apart from the chariot (*ratha*) used for war and sport, there was a draft wagon called the *anas*, and a light two wheeled carriage. The wagon was drawn by oxen generally. The axil-box of a conveyance is mentioned. Horses and oxen, even cows occasionally, were used as draft animals. Horses, asses, camels and elephants were ridden for purposes of travel. The last mentioned animal was used especially for a state journey or procession. Rivers were crossed by rafts or boats, and if necessary, by ships. The *Sūtras* refer to bridges, roads, cross-ways and squares where four roads met.

Taxes

In the Rigveda we get the term *bali*[1] in several places. We also get the term *bali-hrit*[2] meaning tribute-gathering. The latter may refer to some kind of tribute paid to the king. During the *Samhitā* period the king had acquired the right to receive contribution and loyal service from his people. Though, in origin, these were said to be voluntary, they soon assumed the form of tribute *(bali)*, a kind of taxation, that seems to refer to "the share of village horses and kine" in the *Atharvaveda.*

In the texts of the *Samhitā* age, when the resentment at the disappearance of the old order and the appearance of the new one was still quite keen, the king is frequently referred to as the *visamatta*, "devourer of the people",-one who fleeced the people and maintained his household and retinue at the expense or by the contributions of the people in the form of food-grains and other necessaries of life.

In the *Sūtra* period the king was not authorised "to take property for his own use from the inhabitants of his realm" save and except the legal taxes.[3] The taxes were regarded as "pay" received by the king for protecting his subjects. The Brāhmanas were exempt from taxes.

The king was entitled to a sixth portion of the income of his subjects as taxes.[4] According to Gautama[5] the taxes amounted to one-tenth, one-eighth, and one-sixth of the produce. Tax on cattle and gold amounted to one-fifth of the stock. In the case of merchandise, one-twentieth must be paid by the seller as duty. Of roots, fruits, flowers, medicinal herbs, honey, meat, grass and fire-wood, one-sixtieth. Each artisan shall monthly do one day's work for the king. The king was to feed the artisan while he worked for him.

---

[1] *Rigveda*, I, 70, 91 ; V, 1, 10. [2] Ibid., VIII,6, 5 ; X, 173, 6.

[3] Vasishtha's *Dharma Sūtra*, XIX, 14.

[4] Baudhāyana's *Dharma Sūtra*, 1, 10, 18, 19, and Vasishtha's *Dharma Sūtra*, 1, 42.

[5] Gautama, X, quoted by R. C. Dutt, p. 240.

"The incidence of taxation, however, did not fall equitably upon all classes of people. As the members of the royal family, the nobility and the Kshatriya class generally assisted the king in war; it is but natural that this right of maintenance should also be claimed by them. The Brāhmanas also claimed to be exempt from the normal exercise of royal authority, particularly in respect of taxation. In the *rāiasuya* ceremony the priest tells the assembled people: 'This man is your king, Soma is the king of us Brāhmanas.'[1] This passage is then applied to justify the Brāhmanas' exemption from taxation. How far this exemption was carried out in actual practice, it is difficult to say. 'But it appears almost certain that the main burden of taxation fell on the people who pursued peaceful occupations, such as agriculture, cattle-keeping, the arts, crafts, industries, and trade. The texts often describe the 'people' as forming the backbone of royal power."[2]

Conclusion

On the whole, we have enough evidence, however sparse it might be, to convince us that by about the beginning of the 5th century B. C. India, as we have known it in recent times, had developed an economic production-relation based on private property as well as the institutions peculiar to it. Kingdoms had established themselves all over the advanced parts of India—the South, the North-West and the Indo-Gangetic plains. In the North, Magadha, Vatasa, Kosala and Avantī had superseded the sixteen *Mahājanapadas* and we hear of Pukkusātī, the king of Gandhāra, sending an embassy to Bimbisāra. In the South, if we can reply upon the story of the *Mahāvamsa* that a Pāndya prince ascended the throne of Lanka about the time when the Buddha attained his *nirvāna* and also the Tamil tradition that the Pāndya, Chōla and Chēra kingdoms sprang up about the same time, we shall not be far wrong in assuming that these kingdoms had been established about the end of the earlier half of the first millennium B. C. The cultural development depicted in the literature of the *Sangam Age* should have evolved in a king-governed society for several centuries before that era. Further, Megasthenes speaks about the Pāndya kingdom, and it is not unlikely that it had been in existence for a couple of centuries before the Greek ambassador wrote about it. We are told that thirteen *nādus* of the Tamil country were divided between the Pāndya, Chōla and Chēra rulers. The Bhojas were ruling over Vidarbha, the Janakas over Videha (North Bihār). There is evidence to show that the Kalinga kingdom also flourished during this period. A large number of kingdoms is listed as having participated directly or indirectly in the Mahābhārata war.

---

[1] *Satapatha Brāhmana*, V, 3, 3, 12 ; 4, 2, 3.

[2] V. N. Apte in the *History and Culture of the Indian People*, Vol. 1, p. 433.

CHAPTER V

CONSOLIDATION OF PRIVATE PROPERTY AND THE RISE OF EMPIRES

500 B.C. to 200 A.D.

In the previous chapter we have seen the emergence of private property and along with it the birth of kingdoms. The next step in the economic development was the stabilization and consolidation of private property and the rise of empires. Early Vedic society, which was a household or *gana* society, represented the thesis, in which, at a later stage, the antithesis of private interests and possessions appeared and with them different classes of people—the exploiters and the exploited. Antagonism between the two classes, ripening, brought about a series of violent and bloody clashes in the form of wars. As it happened everywhere, the progressive forces of that period—land-owning and other exploiting classes—gained the upper hand, and a new synthesis was established about the beginning of the 7th century B. C. During the succeeding centuries this new synthesis or fresh equilibrium was stabilized and consolidated. Private property became the general rule, and it began to expand and develop.

It is interesting to observe that consolidation of private property and a social and moral structure based on the new property-relations appeared, simultaneously and independently, about the 6th century B. C., in each of the centres of civilization, which thrived on the four great river basins of the Nile, the Euphrates, the Ganges and the Yellow River. Rhys Davids writes that it is a well-known fact that some type of civilization thrived on these basins through thousands of years. "Then suddenly, and almost simultaneously, and almost certainly independently, there is evidence, about the sixth century B. C., in each of these widely separated centres of civilization, of a new birth of ethics, of a religion of conscience, threatening to take the place of the old religion of custom and magic. In each of these countries similar causes, the same laws regulating the evolution of ideas, had taken just about the same number of centuries to evolve, out of similar conditions, a similar result. Is there a more stupendous marvel in the whole history of mankind ? Does any more suggestive problem await the solution of the historian of the human thought ?"[1]

The problem is easy to solve from the economic point of view. By the beginning of the sixth century B. C. private property was stabilized. The old primitive society having vanished from these areas, a new order of society had not only taken birth but got established, demanding a new morality, a new philosophy, a new set of laws. The old production-relations having yielded place to new ones, an entirely new social superstructure was needed to cover them. The great change in the superstructure was due to the revolution that had taken place in the field of economic production-relation. The once free classes, that had been subordinated, subjected and exploited, were taught to despise the misfortunes of this world and to carry on. The small number of exploiters, who could not watch the vast number of ill-fed, half-naked workers, gave them a conscience favourable to the exploiters and against the economic interest of the exploited masses themselves.

There should be no cause of wonder or surprise that man in Egypt, Mesopotamia, India and China, given the same natural facilities for developing the economic forces, should have reached a particular stage of economic and consequent social, ethical, moral and philosophical development at a given time. If we pause at every halt of the marching caravan of economic forces and cast a glance over the entire world, we shall see the same truth which Rhys Davids was able to see about the beginning of the 6th century B. C. The stage some 300,000 years ago reveals the same stone tools in South India, Africa and South England.[2] If we stop and look round some 30,000 years ago we observe men in most parts of the earth using the wonderful machine called the bow. Some 6,000 years ago men all over the world were cooking in earthen pots and having a primitive communistic society. About 2,000 B. C. we see the same type of urban culture with elements of private property in the Indus valley, Mesopotamia, as well as the valleys of the Nile and the Yangtze. About 500 B. C. great religious law-givers rise to consolidate private property and in the 10th century after Christ we see feudalism of almost the same pattern everywhere in the advanced parts of the globe. One thousand years thereafter communistic societies are being born and atomic energy is being harnessed in the service of man.

Private property had been so firmly established that a society with difference in wealth and possession and economic antagonism between husband and wife and the relationship of war between the exploited and the exploiters is clearly described in the literature of the period.[1] A good mass of laws relating to property-relations came into existence. Some of the principal teachings of the Buddha safeguard property-rights. He laid down that a lay disciple should avoid all theft and give the children their inheritance. The child must guard the parent's property. The servant must be content with what is given to him. The *Manu Dharma Sāstra* which belongs to this period enumerates, among others, the following titles of sections which give us a glimpse into the property-ridden society of the period : recovery of debts, deposits and pledges, sale without ownership, partnership, resumption of gifts, non-payment of wages, breach of contract, annulling of sale and purchase, disputes between the owner and tender of cattle, disputes regarding boundaries, theft, robbery with violence, partition of patrimony. In the *Arthasāstra* civil law is treated under the heads of marriage and dowry, inheritance, housing and neighbourhood (including trespass), debt, deposit, slaves, labour and contract, sale, gambling and miscellaneous. Trials by wager or ordeal were also common. Among offences are included theft, burglary, forcible entry, injury to property, boycott and other acts of employees, combinations to affect prices, fraud in regard to weights and measures. Already fencing fields had started and rules framed regarding flowing water.

---

[1] Rhys Davids, *Buddhist India* (London, 1911), p. 239.

[2] See Supra p. 8.

More severe laws were enacted to punish property crimes. The punishment for breaking into a house to steal was impalement. Highwaymen were hanged from a tree by the neck. One who stole a cow had his nose cut off. For stealing more than ten measures of grain the thief was executed ; for less he was fined eleven times what he had stolen.[2] The proof of theft was possession of the stolen property, or a track leading to the house of the suspected man. Similarly, among the Tamils, a thief arrested with stolen property in his possession was beheaded. In the North excessive expenditure, intercourse with sinners, and other signs may make a man suspected. Then he may have to clear himself by oath or ordeal. Nine kinds of ordeals are mentioned by Brihaspati. Justice became class justice. All men were not equal in the eye of law, nor was justice even-handed. Punishment varied from man to man according to his social status.

One of the main features of the new equilibrium was the ascendency of the warrior class and the relegation of the priestly class to a secondary position. In the Vedic days we have noticed the supremacy of the Brāhmanas and during the *Samhitā* period, a clash between them and the powerful Kshatriyas took place for power and wealth. During the millennium between 700 B. C. and 300 A. D. we see that the Kshatriyas attained mastery over the Brāhmanas although the latter could not be crushed altogether. The serpent was not killed but scorched, for we notice the Brāhmana ascendency once more during the feudal period.

---

[1] **Manu, IX, 5-6 : 14-16.**

[2] **Brihaspati, XXII, 9 seq : Manu, VIII, 320.**

As we read the works of the Jains and the Buddhists, we receive the impression that the ancient priestly caste had lost its authority and nobles and wealthy merchants were more regarded than the Brāhmanas. The warrior caste, as the royal caste, represented state-power, whereas the Brāhmanas were only a caste of individuals. Still the Brāhmana class had an extraordinary sense of unity and class consciousness, and the caste, spread throughout the length and breadth of India, was well knit through a series of temples, *āshrams*, *maths* and *pātasālas*. Further, superstition became a compelling power which, however, was exerted to get as much of influence and wealth as possible. The Brāhmana caste was not less powerful than the European Church in any respect. While the Vedas say that the priest is the norm of the world, the epics assert that the king is the norm. The Brāhmanical law declares that the priest has the right of way even over a king, but in the epics we come across an incident when a king meets a priest and calls out to him to get out of his way. The priest demurring, the king smites him with his royal whip despite the Brāhmanical law book. This eclipse of the Brāhmanas was only temporary.

In view of this reduced status of the Brāhmanas, Gautama permits a Brāhmana to become a gentleman farmer and sleeping partner in mercantile or banking firms managed by Vaisyas. Throughout the *Jātakas* we come across Brāhmanas taking to professions other than they are expected to follow.[1] Thus during the period covered by this chapter the Kshatriyas took precedence over the Brāhmanas. But, even in their adversity, the Brāhmanas were clever enough to grab lands and become rich. They induced the villagers and their officials to grant to them the pasture lands which should not have been given to any private individual.

A remarkable feature of the new society was the shameless exploitation by the warrior class, an open exaction at the point of the sword of the product of the labour of more humble and weak creatures. All members of the village community had to render tribute to the king in various forms. In quite early times, when the kingdoms were very small, it was in the form of food or service either to the king or to such members of the royal family or household who paid a visit to the village. As early as the days of the *Samhitās* and the *Brāhmanas*, the Kshatriya class was composed of the king's relations, his nobility, his retainers and other chiefs, and they received revenue in kind from the Vaisyas and Śūdras.

---

[1] Rhys Davids, pp. 56-57.

The immediate followers of the king became a sort of special official class who acted not only as the royal bodyguard, but also as special commissioners and messengers to supervise the administration, as tax-collectors and as officers discharging similar duties. As the representatives of the king, they were exempt from ordinary jurisdiction. Many of them had a seat in the royal court and were granted separate estates. There was a considerable number of wealthy nobles and priests, holding grants of villages or groups of villages either by direct receipt from the rulers or by inheritance from their forefathers.[1]

Misappropriation and unlawful possession of other's lands by officials appear to have been common ; for Manu says that the lords of one, ten, twenty, a hundred and a thousand villages, "appointed to protect, generally become rascals who steal the property of others."[2] According to Megasthenes, the warrior class performed no work in the community except that of fighting. Members of the other classes supplied them with weapons, waited upon them and kept their horses and elephants.

Very large private estates were springing up. The royal domains were considerable. The high officials of the king were assigned the revenue of a part of a village, of the whole of one or more villages or areas. "We read of estates of 1,000 *karīsas* (probably acres) and more, farmed by Brāhmanas, and one large enough to require for its cultivation as many as 500 ploughs and a host of hired labourers to ply these ploughs with their oxen."[3] Religious institutions had added to their holdings through pious gifts, reclamation of waste land and otherwise until they accounted for a large portion of arable lands.

We have reference to very big merchants who were, in all probability, great landlords also. One of them, Anāthapindika, is said to have purchased the Jetavana Park by covering the whole surface of it with gold coins.[1] His wealth was valued at 800,000,000 gold pieces of which he is said to have expended 540,000,000 on the Jetavana site, building etc.[2] Another defrayed the entire cost of construction of the great Chaitya cave at Kārli. There were about a dozen millionaire merchants in Taxila, Sāvatthī, Benāres, Rājagriha, Vesāli, Kosāmbi and

---

[1] *Digha Nikāya*, 1,88 ; Manu, 2,163, 3,133 ; 8,82. Rhys Davids, *Buddhist India* (New York, 1911), p. 48.

[2] Manu, VII, 89.

[3] *History and Culture of the Indian People*, Vol. II, p. 595.

PLATE XIV

Interior view of Chaitya Cave at Kārli the sea-ports.[1] In addition to them there should have been many more in Vidarbha, Āndhra and the Tamil kingdoms. Among the Tamils of this period land was getting accumulated into the hands of the Vellālars (lords of irrigation). The Pāndya, Chōla and Chēra kings belonged to this landlord class.

---

[1] This scene is illustrated in the Bhārhut sculpture.

[2] See the article by Mrs. Rhys Davids in the J. R. A. S., 1901.

While this great accumulation was taking place on the one hand, on the other, freemen were being driven by poverty into the fold of wage slavery, occupying a position lower than that of the slaves *par excellence.* The *Jātaka* puts down as the direst misfortune known that a freeman had to work for hire. There was plenty of land, it declares, to be had for the trouble of clearing it, not far from the settled districts.[2]

This popular view missed one fact. How could a man have maintained himself during the long time that it would have taken to clear the forest and reap the first harvest ? Wherefrom could he have procured implements for clearance, the plough and the oxen for tilling the land, and seed for sowing ? A man, once fallen, was fallen for life except in certain extraordinary cases. Further, a careful reading of the texts suggests that the remark relates to forced labour on the king or lord's land in which case the poor peasant had no option.

The same phenomenon we see in the Tamil kingdoms. Land becomes the exclusive property of the ruling class. The bulk of the population is reduced to the level of serfs and wage labourers. As the landed class (Vellālars) went on multiplying and the landed estates were getting accumulated in fewer and fewer hands, many of the Vellālars were ousted from their small holdings and became cultivating peasants, labouring for wages. They were called *vīlkudi ulavars* (fallen or ruined cultivators).

Just as the appearance of private property coincided with the rise of kingdoms, the carving out of big estates by a few individuals out of the small private holdings seems to have suggested or coincided with the birth of empires. With the coming of the kingdoms, the tendency among them to expand at the expense of one another also appeared. Conquest of smaller kingdoms and the coalescence of petty principalities in the interest of self-defence tended to create bigger kingdoms. Still, by the end of the 6th century B. C. we come across no kingdom which was bigger than two of the modern districts. Such states, as then flourished, were mostly monarchies and a few republics or oligarchies.

---

[1] *Cambridge History of India*, Vol. I, p. 882.

[2] *Jātaka*, II, 378 ; I, 339 and 467.

Āryan social order, its inequities and the attendant oppression resulted in a revolt by the oppressed, especially the Sūdras. The ancient (reserve) vitality of the non-Āryan masses re-asserted itself against the Āryan foreigners, who were now torn by castes and classes and were becoming effiminate. The non-Āryan was free from the bonds of caste, the routine of superstitious sacrifices and the restrictions of ceremonies. This greater freedom gave him more vitality. The non-Āryans, especially the Nāgas, who had been vigorously fighting the Āryans since their arrival in India, were the first to inaugurate an era of imperial unity for which the way was shown by the Persian conquerors of North-West India. Alexander's invasion unified Northern India and paved the way for Chandragupta. After the fall of the Mauryas, the Kushān empire embraced not only nearly the whole of North India, but also considerable territories outside it as far as Central Asia. The kingdoms of Vidarbha and those of the Sātavāhanas, the Chōlas, the Pāndyas and the Chēras were vying with each other to establish empires in their respective areas ; and by about the end of the 3rd century A. D. we see several empires rise up in different parts of the sub-continent.

By about the 3rd century A. D. private property was consolidated throughout India backed by the sword of powerful rulers like the Mauryas, the Sungas, the Bactrians and the Kushānas in the North, the Āndhras in the Deccan, and the Tamil rulers in the South and blessed and supported by great religious teachers like the Buddha and Mahāvīra of the North and Tiruvalluvar of the South. While small land-holders were being expropriated in favour of the privileged few of a semi feudal type, small kingdoms were being liquidated to create mighty empires.

These changes brought enormous wealth and estates to the ruling class and resulted in the great luxury of a few. On the other hand, the bulk of the population was reduced to slavery pure and simple or to wage slavery (which was, in certain respects, much worse) and exposed to untold miseries. While the majority of the population lived in small hamlets known as *pallis*, people belonging to the middle and higher classes lived in villages (*grāmas*) around the forts or in townships (*nagaras*). The kings and great lords lived in luxurious palaces and villas. Thus the cleavage between the upper classes and the lower ones, between the exploiters and the exploited became marked and palpable.

Slavery

"Accroding to Manu and Nārada, slaves could be acquired by birth in the master's house, by purchase, by gift, by inheritance, by maintenance during famine, by pledge, by release from a heavy debt, by capture in war, by gain in wager, by voluntary surrernder of freedom, by apostasy from asceticism, by connection with a female slave, and by several other processes. Slavery was also the judicial punishment for crime."[1] The slaves according to Nārada had to do impure work. Most classes of slaves could be emancipated if the master wanted to do so.

There is a tendency among some Indian writers to say that slavery in India was not as bad as under the Greeks, Romans and other European nations. But the rules and regulations which have come down to us leave us in no doubt regarding the fact that the treatment of slaves was as bad as that of cattle. Slaves, like cows and oxen, were items of wealth. In a land where the ox is worshipped and the cow deified, if slaves were now and then treated well, it was out of economic and not humanitarian considerations. The number of slaves during this period was less than in the preceding periods and most of the slaves were used in domestic service. Violence against slaves was not illegal.[2] Their social status, if born at the owner's house, was higher than that of hired labourers. The order of precedence in a house after the master of the house was children, wives, slaves, workpeople. It is interesting to note that among the slaves there was a category called daily workers for food.[3] Sturdy peasants driven by economic necessity, leaving their barns and toiling as hirelings is reported. "The landless labourer, hiring out for work, ranked below the slave."[4]

Agriculture

In the Vedic period every citizen had a piece of land to cultivate and in the Epic stage there were many citizens without land. During the period covered by this chapter the number of landless people became much larger. Each village had its land around it. The fields were all cultivated at the same time, the irrigation channels being laid out by the community, and the supply of water regulated by rule, under the supervision of the headman. No individual or

---

History and Culture of the Indian People, Vol. II, p. 570.

J. R. A. S., 1901, p. 862.

History and Culture of the Indian People, Vol. II. p. 595.

Rhys Davids, p. 102.

corporate proprietor needed to fence his portion of the fields. Each citizen's or family's estate was marked out by rows of boundaries, which were also the water channels. The field, as a whole, bore the appearance of the patched robe of a member of the Buddhist order.[1]

According to Megasthenes, the greater part of the arable land was under irrigation and there were some officers to superintend the rivers, measure the land (as was done in Egypt) and inspect the sluices by which water was let out from the main canals into their branches, so that every one might have an equal supply of it. Irrigation was an object of great solitude and naturally under the charge of the state, which regulated the supply of water and derived revenue from it. The *Agronomoi* supervised irrigation, land-measurment and the various industries connected with agriculture and forestry. Megasthenes says that owing to irrigation, famines were quite unknown. But there are many earlier references to times of scarcity, and that, too, in the very district adjacent to Patna where Megasthenes lived.[2] It is possible that conditions should have improved under Chandragupta ; but it will be too credulous to imagine that the first Maurya had banished all scarcity from his empire.

There were model government agricultural farms where seeds of various agricultural crops were collected. The government also maintained flower, fruit and vegetable gardens and raised commercial crops like cotton (*kārpasa*) and jute (*kshuma*).

Cultivators who formed the bulk of the population, never took any part in war, their whole business being to cultivate the soil, pay taxes to kings or the free towns, as the case may be. According to Megasthenes, war rolled past the cultivators. At the very time when a battle was going on, the neighbouring cultivators might be seen quietly pursuing their work of ploughing or digging unmolested. The enemy, coming upon a husbandman at work on his land, would do him no harm, for men of this class were regarded as benefactors of society. However, it is difficult to regard this rosy pictury given by Megasthenes as a true representation of facts. Conditions in South India were quite different. Men trained for the profession of arms alone engaged themselves in war. Yet, "the poorer classes who lived in villages remote from the capital towns were exposed to frequent attacks from the neighbouring chiefs and suffered terrible hardships. Their cattle were carried away ; their houses were burnt down, and they were driven out of the village or slaughtered, if they offered the least resistance. The large population of the great cities such as Madura, Karūr and Kāviripattinam enjoyed, however, almost perfect immunity from the horrors of war. The inhabitants of most of the important towns, which were strongly fortified, were secure from the evils attending occupation by a hostile army."[1] The account of the conquest of Kalinga given by Asoka in his Rock Edict XIII clearly establishes the fact that war caused great misery to the non-combatant population in other parts of India as well.

---

[1] *Vinaya*, I, 287 ; II, 185 ; *Jāt.* IV. 276.

[2] *Vinaya*, III, 20 ; *Jātaka*, II, 149, 367 ; V, 193 ; VI, 487.

The Greeks noticed two annual harvests, one in winter and the other in summer and were astonished at the fertility of the soil. Megasthenes writes : In addition to cereals, there grows throughout India much millet, which is kept well watered by the profusion of river streams, and much pulse of different sorts, and rice also, and what is called *bosporum*, as well as many other plants useful for food, of which most grow spontaneously. The soil yields, moreover, not a few other edible products fit for the sustenance of animals, about which it will be tedious to write ... For, since there is a double rainfall in the course of each year,—one in the winter season when the sowing of wheat takes place as in other countries, and the second at the time of the summer solstice, which is the proper season for sowing rice and *bosporum*, as well as sesamum and millet. The inhabitants of India almost always gather in two harvests annually ; and should one of the sowings prove abortive, they were always sure of the other crop. The fruits, moreover, of spontaneous growth, and the esculent roots which grow in marshy places and are of varied sweetness, afford abundant sustenance for man."[2]

Aristobulus describes the cultivation of rice in enclosed sheets of water.[3] Two other cultivated crops are mentioned by the Greeks—the reeds that make honey without the agency of bees (sugar-cane) and the plant which yields vegetable wool (cotton). The *Maduraik-Kānchi*, a contemporary poem, describing the market square a Madura says, "Sacks of pepper and the sixteen kinds of grain, such as paddy, millet, gram, peas, sesamum seeds, are heaped in the grain merchants' street ; and the measurers move to and fro with measures in their hands, weighing or measuring the pepper and grains purchased by the people."[4]

---

[1] V. Kanakasabhai, *The Tamils Eighteen Hundred Years Ago* (Madras, 1904), p. 109.

[2] Megasthenes, Frag. 9. = Strabo XV c. 693.

[3] Aristobulus, Frag. 29. = Strabo, XV, c. 692.

[4] *Maduraik-Kānchi*, 11. 489 seqq.

The *Vinaya* texts refer to several crops as rice, which is staple food, beans, *tila* seeds, molasses, pot-herbs and fruits. A wandering ministral of Tamil Nād reports "The Eyinar or hunters served him with coarse rice of a red colour and the flesh of the guana, on the broad leaf of the teak tree. The shepeherds gave him maize and beans and millet boiled in milk. In the agricultural tracts the labourers invited him to meal of white rice and the roasted flesh of the fowl. On the sea coast, the fishermen fed him with rice and fried fish in dishes made of palmyra leaves. The Brāhmins gave him fine rice with mango pickle and tender fruits of pomegranate cooked with butter and the fragrant leaves of the *karuvēmbu* ; and the Ulavar or farmers feasted him with sweet-meats and fruits of the jack and plantain and the cooling water of the cocoanut."[1] Linseeds, rice of different varieties, *kodrava* (a kind of coarse grain), pulses, mustard, vegetables and tubers, pumpkins, gourds, plantains, grapes and safflower are mentioned in the *Arthasāstra.*[2] According to the *Periplus*, Gujarāt was a fertile country yielding wheat, rice, sesame and cotton.

Agriculture, and even irrigated agriculture, was firmly established in most parts of India. In the South we come across a class of landholders who were known as *Vellālar* or experts in irrigation. Lakes, reservoirs, ponds, channels and wells used for watering the fields are mentioned in the Tamil literature of the period.

Pastures

Beyond the arable land of the village and around it lay its meadows or camps for cattle on all sides for about one hundred bow (about 600 ft.), which were common for the grazing of its cattle and also those belonging to the state, under a common neatherd *gopālaka*, whose duty was to pen the flocks at night or to return them to the owners by counting heads. Besides pastures, towns had their suburban groves like the Veluvana of king Bimbisāra at Rājargriha, the Anjanavana of Sāketa or the Jetavana of Srāvasti.

In addition to the grazing ground, each village had a considerable stretch of jungle, where the villagers had common rights of pasture and wood. The cattle belonged generally to the households of the village. But no one had a separate pasture. After the crop was reaped, the cattle roamed over the field. When the crops were growing they were sent all together, under the charge of a herdsman, hired by the village collectively to the village grazing grounds beyond the field.[3]

---

[1] *Perum-Panarru*, 11, 299-362.

[2] *Arthasāstra*, II, 24.

[3] *Jātaka* I, 194

Beyond the restricted areas in the neighbourhood of villages, which were used as pastures, there were large spaces (*vīvīta*) occupied by the nomad, tent-dwelling[1] ranchers. The *ghosha* (hamlet) which formed the headquarters of the ranching class was less organised than an agricultural village. The cattle wandered through the outlying forest over which the peasantry had rights of common.[2] No individual could acquire, either by purchase or inheritance, any exclusive right in any portion of the common grassland or woodland. Great importance was attached to these rights of pasture and forestry. In spite of it, the priests were the first to get grants of such common, pasture or forest.

Forestry

Forests must have been much more extensive than at present and they were visited by trappers and hunters and utilized for raw material. There were several types of forests, those reserved for hunt, ordinary ones and forests planted with timber yielding trees. Forests supplied bamboo, bark, creepers like cane, fibres like hemp, roping materials like *munja ;* leaves for writing on, such as palm leaves ; flowers as material for dyeing like *kimsuka*, *kusumbha*, or *kunkuma* ; medicinal herbs, roots and flowers ; metals like iron, copper, tin and led ; firewood, charcoal, ash for manure and fodder for animals. Certain forests were reserved for the breeding of elephants so necessary for economic and military purposes, under a special conservator of forests called *Nāgavanādhyaksha*.[3] The yields from the animals of forests were hides, skins, sinews, bones, teeth, horns, hoofs and tails of animals like the leopard, the tiger, the lion, the elephant, the buffalo, the yak, the allegator, the tortoise, the snake and birds.

There were forest factories where artisans manufactured articles like the plough, pestle, mortar, utensils of clay, bark and cane articles, weapons and carts, out of the forest products.

Animals Husbandry

The herdsman was expected to be one "knowing the general appearance of each one of his charge and marks upon it, skilled to remove flies' eggs from hide and make sores heal over, accustomed to keep fire going with smoke to keep the gnats away, knowing where the fords and drinking places are, clever in choosing pasture, leaving milk in the udder, and with a proper regard for the leaders of the herd.[4]

Every king maintained large herds of cattle in suitable forest patches and inspected the animals now and then. King Virāta of Matsya had a very large herd of cattle.[1] The *Periplus* states that Gujarāt had many cattle and extensive pastures. During a visit to the Dvaitavana to inspect his herds, Duryodhana "saw the bulls and cows by hundreds and thousands and marked them by signs and numbers and marked the calves also and saw the cows which had just calved. He then particularly marked bulls that were three years old."[2]

---

[1] *Megathenes*, I, 47.

[2] Rhys Davids, p. 20.

[3] *Arthasāstra* Book II, Chapter 2.

[4] Manu, I, 223.

Herdsmen and hunters who lived a nomad life in jungles and on the hills, brought a certain proportion of their cattle to the cities as tribute. They also received in return for their services a grant of corn from the king. Concerning the animal wealth of India, the Greeks have mentioned with wonder elephants, monkeys and snakes. In the later series of Mahādeo Hills rock paintings, appears a goose along with a large number of other birds, and sambhar does are painted at Kohbār.

Animals in forests were the property of the king, and no one had a right to hunt them except with the permission of the ruler. If large animals such as horses, camels, elephants or cows (which were considered as equal to big animals) were killed, a fine of 500 *panas* was imposed, for killing cattle (other than a cow) 200 *panas*, for killing a beautiful wild quadruped or bird 50 *panas*, for killing a donkey, sheep or goat five *māshas* and for killing a pig or dog one *māsha*.[3] The animals noticed in the preceding chapters should have continued as they still do.

House Buildings

The buildings at the Bhīr Mound (Taxila) were of rubble masonry. The walls were built of limestone and *kanjūr* (stone) combined, but sometimes of limestone only and sometimes of *kanjūr* only. The *kanjūr*, due to its soft porous nature, affords an excellent bed for mud or lime plaster and helps greatly to bind and solidify the masonry. The walls were finished off both externally and internally with a thick coating of mud plaster. The mud was mixed with chopped straw in order to bind it together. The remains of the Bhīr Mound comprise blocks of dwelling-houses and shops, divided by streets and lanes. The lay out is irregular and haphazard. The principal street is about 22 feet broad and the other streets between 9 to 17 feet. The lanes are very narrow. Here and there small open squares were provided. The streets were not paved.

Although a few remains of covered surface drains have been

---

[1] The *Mahābhārata, Virāta-Parvan*, X, 9-15.

[2] C. V. Vaidya, *Epic India* (Bombay 1907), p. 170.

[3] Manu, VIII, 296-298.

PLATE XV

Soak-well made of earthen jars placed one above another, with their bottoms removed. In second Street, Blocks D and G, Bhir Mound.
(Taxila, Vol. III, Plate 6)

unearthed in one street and another lane, there is no evidence that they were connected with a larger drain in the main street. No evidence of such drain has been found at Sirkap where there is only a culvert at the north gate of the town to carry the flood-water. For discharging ordinary refuse, bins were provided in the public squares and streets. For the disposal of sewage, each house was furnished with one or more soak-wells. Similar soak-wells were also provided for public convenience in some of the small open squares.

"The design of the buildings is the common oriental one of the open courts with rooms on one or more sides ; but there is so much diversity in the application of this principle and the plans are so chaotic, that it is often impossible to determine where one house ends and another begins."[1] For considerations of safety and privacy, windows in ground-floor rooms which opened on to a street or square took the form of narrow slits, through which prying eyes would find it difficult to peer.[2] Houses in the Tamil country also had such small slits which were shaped like the eye of a deer. The roofs were flat and covered with earth. Taxila had no well. Water had to be drawn from an adjacent *nāla* (channel) named Tamra *nāla*. A pillared hall has been brought to light. Marshall thinks that the hall could have served the purpose of a temple or a *dīwān* for the reception of guests like the *dīwān* in the later palace at Sirkap. The pillared hall is oblong in shape measuring 59 × 24 feet. The walls are of the usual rubble masonry compacted with shale, and stand only 5 to 6 feet in height ; they are not pierced by any openings. There is a square tank-like erection in a room. It may be an ablution tank or a fire-pit. The structure definitely belongs to the post Alexandrian period.[3]

While rubble or brick seems to be the material used for construction in towns lying away from big rivers, houses and even palaces in cities beside rivers were made of wood. Houses in Taxila were built of rubble while Srāvasti, Bhīta and a few other towns had walls of mud and brick. Pātaliputra, the capital of the Magadha empire, was situated on a river bank, hence the chief materials used in the construction of dwelling-houses and palaces were bamboo, timber and thatch. Imposing structures giving great comfort could have been built of wood and bamboo, but they have not left any remains behind to help the historian tread on a firm ground. Only fragments of the wooden palisades (ramparts) of Pātaliputra have been discovered at Bulandī Bāgh near Patna. Even Asoka's great palace seems to have been built chiefly of wood.

---

[1] D. H. Gordon, p. 184. [2] Ibid.

Sir John Marshall, *Taxila* (Cambridge, 1951), Vol. I, p. 92.

The remains of a great hall was unearthed by Dr. Spooner. The hall had a wooden floor, the pillars stood on wooden bases and supported a wooden superstructure. The arrangement of pillars in square bays over the whole floor of the hall and their finely polished surface were traced by Dr. Spooner to the example of the Achæmenian Hall of a Hundred Columns. The hall, according to Percy Brown, was reared in three storeys on a high stylobate, and contained fifteen rows of fifteen pillars each. Polished stone was used for a variety of purposes in the structure. The single shaft, that has survived, bears a mason's mark similar to a symbol used at Behishtūn in Persia.

At Sirkap the hard lime stone wall which surrounded the Sirkap city was 3½ miles in length with a thickness varying from 15 to 21 feet 6 inches. Throughout its whole length the core of this wall was composed of random rubble in mud. A large hall constituting the northern gateway proper is 62 feet by 35 feet. In the main entrance hall there are remains of two small wells constructed of rubble stone—probably refuse wells. Marshall thinks that the stone fortification was built about the middle of the 1st century B. C. The houses are also built with rubble. The best of this rubble masonry, that is, the neatest and most compact, is found in the fifth and fourth strata. While the roughest occurs in the sixth. From the third stratum downwards kanjūr is used more freely.[1] Some rooms have a limestone pavement.

"In the Tamil country the houses of the poor classes were built of mud and thatched with grass or with the leaves of the cocoanut or palmyra palm ; and their walls were painted with red earth. Many of the houses in towns were built of burnt brick and had tiled roofs : the walls were plastered with lime, and small windows shaped like the eye of the deer admitted light and air into the inner compartments. The gateway or portico was approached from the streets ; and piazzas erected on both sides of the entrance afforded seats for visitors or the inmates of the house during their leisure hours. The gateway was fixed on the compound wall. There was an open yard between the portico and the dwelling part of the house. In the yard, stalls were erected for sheltering domestic animals such as sheep and cattle.

"The mansions of the wealthy citizens, had terraces and towers and separate bedrooms for the summer and winter seasons. Temples and palaces were also built of brick, and no buildings of stone are alluded to in the literature of this period except some of the great fortresses, the walls, ramparts and towers of which were constructed with rough hewn stone and lime mortar. Stone might have been used in the early courses below the ground or basement level. All the villages and towns were more or less fortified against the attacks of robbers and enemies."[1] The main streets of Madura were long and broad as rivers and buildings on either side of the main streets were, most of them, lofty mansions with upper storeys furnished with many windows.[2]

---

[1] Marshall, *Taxila*, Vol. 1, p. 119.

"On a spacious lawn, enclosed by a wall, stands the palace of the Pāndya. The gateway is so high as to allow elephants to enter with banners erect on their backs. The tower over the gateway is like a hill and the passage underneath like a tunnel bored through the hill. The folding gates are strongly rivetted with iron and provided with massive bolts and bars. They are painted with vermillion, and on the doorposts are carved images of the guardian deities. Stately apartments are reserved for the use of the queen. The walls are of the hue of polished brass and are at intervals washed with lime which shines like silver. The beautiful creepers painted on the walls, and the blue colour of the pillars blend to make a harmonious picture of the whole."[3]

The buildings of this period excavated at Ujjayini are made of burnt bricks and rubble in mud mortar. Floors were either of clay or brick jelly, while roofs were made of oblong tiles."[4] At Nāsik, Brahmapurī and Mādhavpur we come across "brick houses roofed with a peculiar style of pottery tile, secured to the rafters by wooden or iron pegs through the two peg-holes and having a groove on opposite faces along each edge so that tiles should overlap. The foundation of these houses were usually formed by bedding the brick work on a thick layer of pebbles set in a hard greenish clay. These houses are connected with the southern red-and-black ware of the second half of the first millennium B. C.[5]

---

[1] *The Tamils Eighteen Hundred Years Ago*, pp. 129-30.

[2] *Maduraik-Kānchi*, ll. 337 seqq.

[3] Ibid., ll. 716 seqq ; *The Tamils Eighteen Hundred Years Ago*, p. 185.

[4] *The Statesman* dated 9th August, 1958.

[5] D. H. Gordon, *The Pre-historic Background of Indian Culture*, (Bombay, 1958) p. 186.

Pottery

The pre-Greek pottery of this period unearthed at the Bhīr Mound, Taxila, is entirely wheel-thrown and comprised a narrow-necked wine-jar, cooking pot with lug ears, flat bottomed jar of the *martbān* shape, spouted jugs with ox-head handle and gadrooned neck, all of well-baked plain red ware. Along with these are found two samples of grey ware with simple incised designs—a squat flask with convex base decorated with chevron and crossed patterning and a narrow-necked flask with spiral pattern round neck.

Among the ceramic wares of the Greek period the most note-worthy are a few pieces of Hellenistic 'black' and embossed wares, which made their appearance after the invasion of Alexander the Great. The embossed ware has characteristically Hellenistic designs of vine and floral scrolls and running spirals. Local black-and-red ware as well as plain grey pottery has been brought to light. A small *lota*, a cooking pot, a drinking cup, bowls, basins and several minor articles, all of ordinary red ware, have been unearthed.

Of the later earthen vessels only a very small proportion shows Hellenistic influence. A small but attractive jar is embossed and stamped with formal Greek devices. There are two travellers' water-bottles and a baking-pan with two handles. Most of the pottery is Indian without any special features, The only concern of the potters appears to have been to produce a cheap, serviceable article and not to make it either stylish or beautiful. Of the pottery brought to light at Sirkap some are purely Greek ware, notably, the specimens of 'black-varnished' ware. Some of the indigenous vessels, however, display new developments in shape and decoration. A barrel-shaped store jar with carinated bottom and shoulder marks a new departure from the older types of store jars found in the Bhīr Mound. Another new shape is the narrow-necked oil-flask with slightly ovoid body and flat base. A new type of decoration is the incised cross-hatchins on the *gharā* in place of the older vertical combing.

The characteristic red-and-black ware of the period is, as a rule, burnished with a smooth pebble or a bone tool before firing which imparts a polished surface to the slip. The interior of the pot is black, and so to a varying extent is the outside from the rim downwards due to the pots being fired face down in reducing conditions. The lower portion of the exterior is fired red. This style of pottery is common in South India. The important Āndhra pottery was a red ware. Carinated utensils of the type from Nāsik, Brahmapurī, Brahmagiri, Chandravalli and others found at Mādhavpur near Belgaum are examples of typical Sātavāhana (Āndhra) pots.[1]

Terra-cotta figures and toys reappear for the first time at the Bhīr Mound, Taxila. In contrast with the indigenous pottery, the small terra-cottas, which in this period are all but exclusively Indian, frequently show considerable imagination and, in spite of their rough workmanship, a real appreciation of decorative detail. Many of them are of a religious character. Of secular objects of terra-cotta the principal ones are children's playthings, which take the form of the familiar toy cart, animals runing on wheels, and rattles. Other articles of a secular kind are, a playing die, a few bullae adorned with rosettes or geometric devices.[2] At a later period a mixture of Hellenistic and Indian types is to be seen among the terra-cottas. Belonging to the Hellenistic type is the head of a female figurine with an engaging smile. Another fine modelled bit of work shows the head and shoulders of an orang-utan which made Marshall suggest that "Jāva and Sumātra—the present habitat of the orang-utan—were not unknown in those days to India."[3] In the temples and monasteries of South India there were images of gods and goddesses made of mortar and painted exquisitely with a variety of colours.[4]

Carpentry

The *Jātakas* contain many references to woodwork including ship-building, house-building, and the making of carts, chariots and machines of various types. The Tamil literature of the period describes many curious machines which were mounted on battlements to shoot arrows or fling stones. There were machines like the fishing-rod and angle to catch and drag up those who approached the wall and like iron fingures to seize and tear them to pieces. The *Arthasāstra* mentions fixed and mobile machines such as the 'hundred slayer'. Most of these machines should have been made of wood with iron parts if necessary.

The high degree of excellence which the craft attained during the period is attested to by the large wooden platforms that have been unearthed at Kumrahar in the vicinity of Patna. "The platform", reports Dr. Spooner, who made the discovery, "was found to be merely a solid accumulation of logs. But the neatness and accuracy with which it has been put together, as well as the preservation of the

---

[1] D. H. Gordon, p. 186.

[2] Marshall, *Taxila*, p. 108.

[3] Ibid. p. 127.

[4] *The Tamils Eighteen Hundred Years Ago*, p. 130.

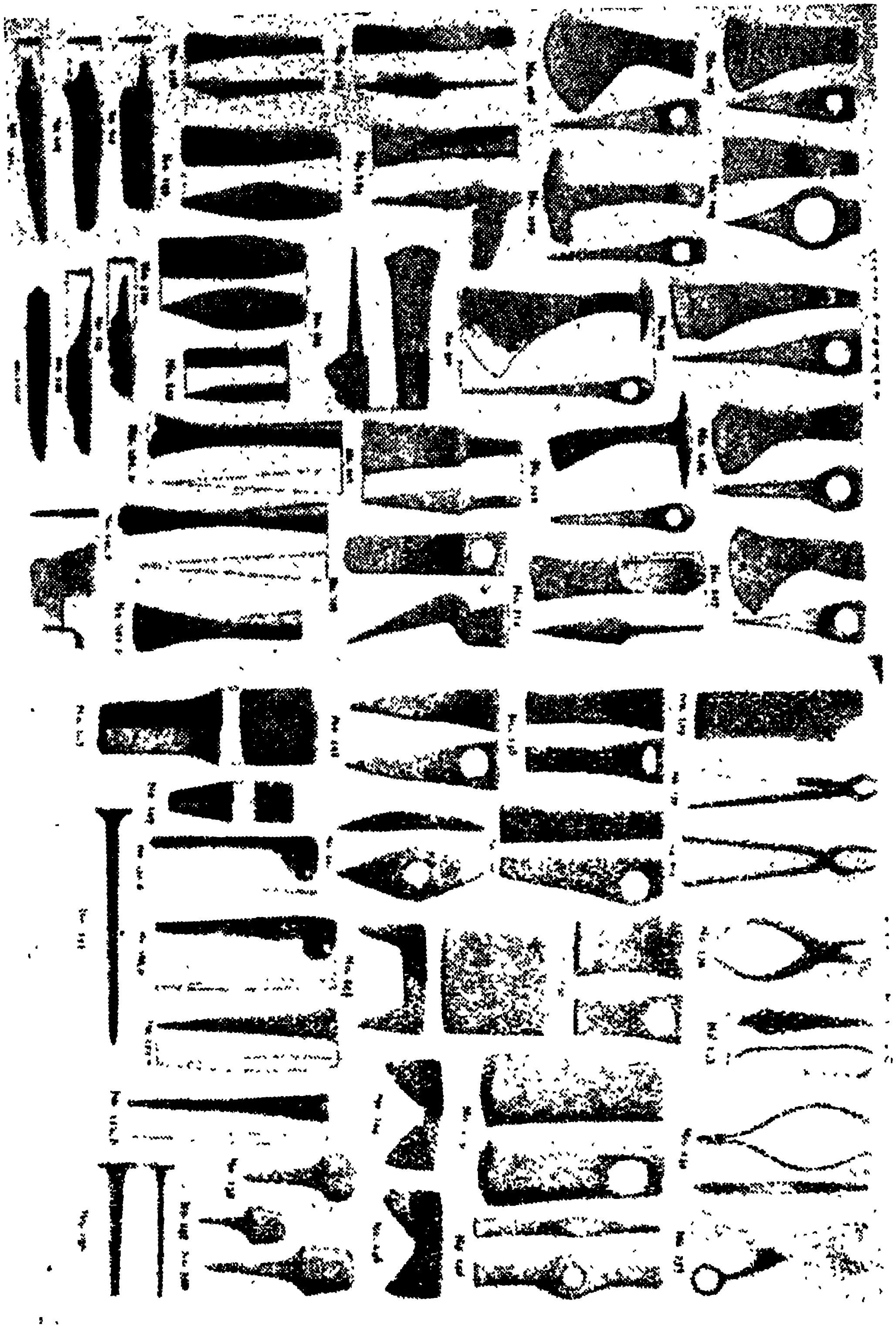

PLATE XVI

Some of iron implements used in carpentry and other crafts

(Taxila, Vol. III, Plates 166 & 167)

ancient wood, whose edges were so perfect that the very lines of jointure were indistinguishable, evoked the admiration of all who witnessed the experiment. The whole was built up with a precision and a reasoned care that could not possibly be excelled to-day, and which, I fancy, is only rarely, if ever, equalled in India." Again, "in short, the construction was the absolute perfection of such work. The builders who erected those platforms would find little indeed to learn in the field of their own art, could they return to earth to-day."[1] We have reports in the Tamil literature of excellent dolls carved out of wood and such carving in wood as well as ivory should have preceded the excellent sculpture of the period. Again we have mention in the Tamil literature of furniture of various descriptions such as raised seats, cots with canopies and cushions stuffed with swan's down, lamps borne by statues and swings for the amusement of women and children.

Stone Work

The stone-cutter is often mentioned in the Jātakas. The cyclopean enclosure-wall of a shrine at Nāgarī in Rājutāna may be of this period. Stone chiselling and metal polishing reached a high degree of excellence. The rock dwellings for monks like the Chaitya cave at Kārli exhibit a striking skill with which these monuments were chiselled. The introduction of stone on a large scale as medium was due to Greco-Persian influence. Stone sculpture is to a large extent of foreign origin quite distinct from all other Indian works. The stone sculptures are highly stylized, yet they are marked by a striking naturalism seldom rivalled in Indian art.

The art of Asoka's time, as seen in the pillars and capitals, is a mature one. The columns themselves are monoliths of enormous size, the heaviest weighing about fifty tons. The capital of each pillar comprised three members, which are most clearly marked in the Sārnāth capital which crowned the column raised in the deer-park where the Buddha delivered his first sermon. "The lowest member of this richly decorated capital is an inverted lotus, bell-shaped, with its petals indicated by bold fluting of its entire surface. Above it is an entablature with a frieze bearing sculptures in very high relief with the plastic qualities of sculptures in the round ; they comprise four animals, an elephant, a galloping horse, a humped bull, and a lion representing respectively the east, south, west and north, a symbolism traceable to Vedic sources. The four animals are separated by as many wheels

---

[1] Archœological Survey of India—Annual Report, 1912-13, pp. 73 seqq.

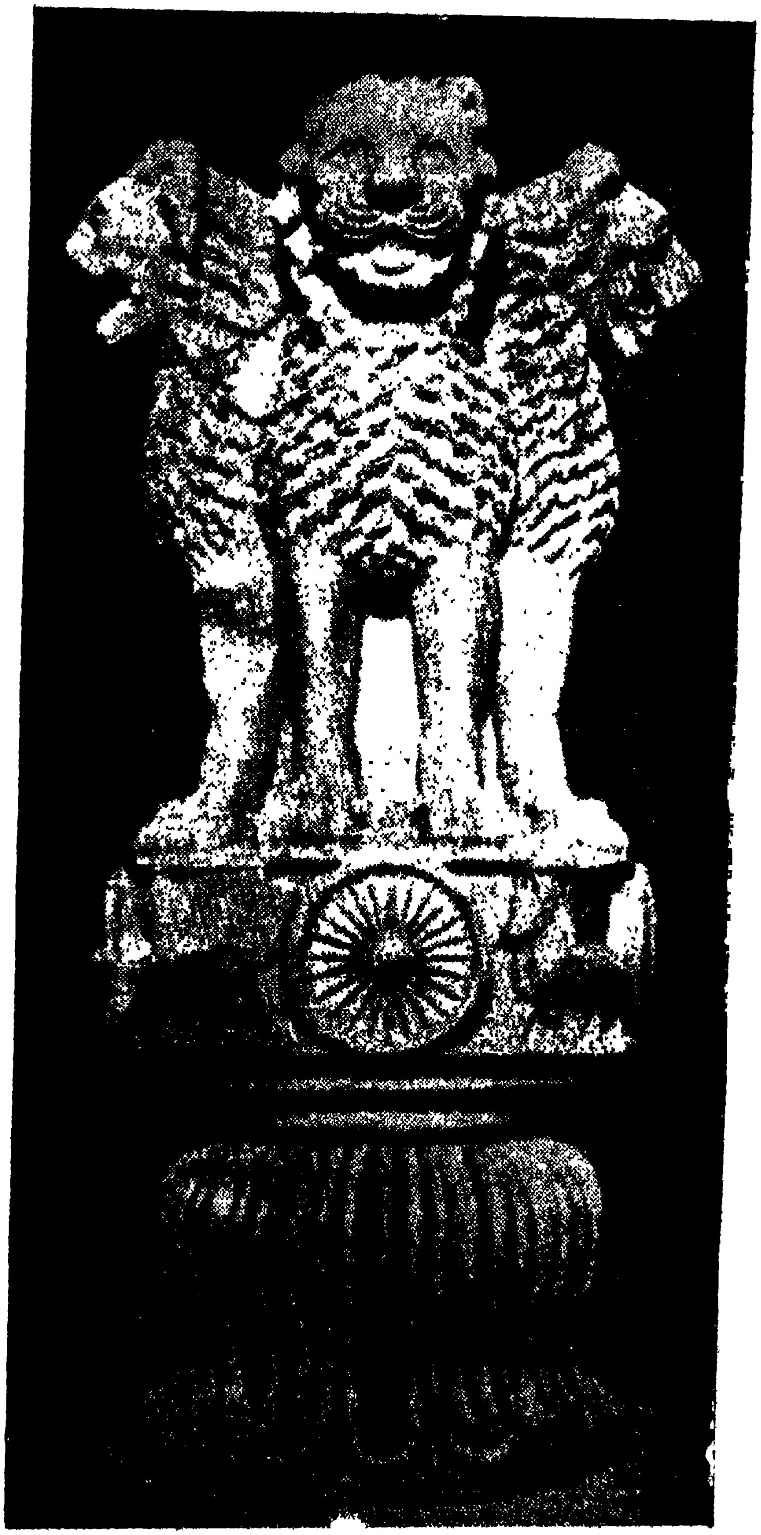

PLATE XVII

Capital of Asoke's Column at Sārnāth

(*chakras*) in the interspaces. At the summit of the capital there are four lions, or rather, the forequarters of four lions, standing addorsed, which carried on their backs, to crown all, a stone wheel, 2 feet 9 inches in diameter, of which only fragments remain."[1]

The Sārnāth capital is the product of the most developed art of which the world was cognisant in the third century B. C.—the handiwork of one who had generations of artistic effort and experience behind him. In the masterful strength of the lions, with their swelling veins and tense muscular development of the face and paws and in the spirited realism of the *bas reliefs* on the abacus, there is no trace whatsoever of the limitations of primitive art. "It is difficult to find in any country," as remarked by Smith, "an example of ancient animal sculpture superior or even equal to this beautiful work of art which successfully combines realistic modelling with idealistic dignity, and is finished in every detail with perfect accuracy."[2]

Within the limits of the general scheme, the artist enjoyed considerable freedom, and this accounts for the wide difference in detail among the capitals, the abacus being rectangular or circular to suit the sculpture above it. In several cases the terminal statues are lions standing or seated, at Sankisa an elephant, and a horse at Rummindei (Lumbini), the site of the Buddha's birth.

With the rise of the Sunga power in North-East India during the second century B. C. and the simultaneous extension of the Bactrian dominion to the Punjāb, the national art of India underwent a rapid development. Foreign, and especially Hellenistic, ideas now flowed eastward in an ever-increasing volume, and from them the Indian artist drew new vitality and inspiration for his work. At the same time stone more and more usurped the place of wood for architectural purposes, and by reason of its greater durability, tempted the artist to expend more pains upon its carving, while it naturally lent itself to more perfect technique.

Metal Work

Megasthenes writes that India had "under ground numerous veins of all sorts of metals, for it contained much gold and silver, and copper and iron in no small quantity and, even tin and other metals, which are employed in making articles of use and ornaments, as well as the implements and accoutrements of war."[3] Strabo mentions 'mines of gold' in the North-Western part of India.[1] The *Periplus* speaks about gold-mines in the vicinity of Gange,[2] a port in the mouth of the Ganges. Herodotus states that India counted as the twentieth satrapy of the empire of Darius, to which, however, it contributed a third of its revenue—360 Euboic talents of gold-dust,[3] equivalent to over a million pounds sterling. All this gold must have come from the washings of the upper Indus beds which, according to geologists, were distinctly auriferous in those days,[4] and also from the gold-mines of Dardistān which were guarded by Tibetan mastiffs.

---

[1] *A Comprehensive History of India* (Calcutta, 1957), Vol. II, p. 91.

[2] Smith, *History of Fine Arts in India and Ceylon*, p. 18.

[3] McCrindle, *Megasthenes and Arrian*, p. 95.

Strabo charges the Indians with being backward in the scientific development of the resources of their country. They had good mines of gold and silver ; yet they, "inexperienced in the arts of mining and smelting, do not even know their resources, but set about the business in too primitive a way."[5] From Nearchus we learn that the people of India then used only cast bronze, but not hammered, so that their vessels broke like earthen ware, if they fell.[6]

Metal articles belonging to this period have not been recovered in large quantities. "Actually metal does tend to disappear, and this applies in equal measure to copper and bronze. Dealers in scrap metal must have existed from the earliest times of its use. It was much easier to deal with damaged or outmoded articles than to smelt the metal from fresh ore, and smiths' hoards are in fact one of our most fruitful sources of metal objects and without these and the deposit of metal in graves, we should have very little knowledge of any of the metal work of the past."[7]

Iron does not appear to have been available in plenty in the North about the beginning of this period ; for Herodotus says that the Indian soldiers who fought in Greece under Xerxes (466-465 B. C.) carried bows of cane and arrows of cane, the latter tipped with iron.[8] According to Arrian, the foot soldiers carried bucklers made of undressed ox-hide. Although relatively more iron could be found in the South, the process of smelting being difficult and costly, iron was used sparingly. The infantrymen carried in their left hand large bucklers made of ox-hide and in their right hand a lance or a battle axe in addition to broad swords, a yard long. The cavalry carried lighter arms and shorter bucklers.[1] Probably hide bucklers instead of iron shields were supplied to soldiers for want of ample iron of good quality. Anyhow iron must have been costly. Commanders, riding chariots with two low wheels, are reported as carrying shields adorned with gold in addition to the usual lances, swords and javelins (for hurling at elephants) and as wearing coats of mail.

---

[1] McCrindle, *Fragments from Strabo*, XV, 1, 44.

[2] Schoff, *Periplus of the Erythræan Sea*, pp. 47-48.

[3] Herodotus, III, 94.

[4] V. Ball in Indian Antiquary, August, 1884.

[5] Strabo, XV, C. 700-701.

[6] Nearchus, *Frag.* 7 = Strabo, XV, C. 706.

[7] D. H. Gordon, p. 155.

[8] Herodotus, VII, 65.

Notwithstanding the fact that iron was used sparingly, and in spite of the tendency of all metals to disappear, many articles of iron are mentioned in the literature of the period—arrow-heads, swords, daggers, battle-axes, shields, coats of mail and breast-plates, several machines with iron parts, bolts, bars, rivets, ornamented chariot steps, steel belts which could not be cut, shields to protect the face of elephants, saws, lathes and other tools.[2] Moreover, many articles have been brought to light by the labours of archæologists.

In addition to the South Indian iron finds noted in the previous chapter, search at Jangada, in Orissa, has confirmed the early use of iron in that area. The earliest stratum in the Garh Kalika mound had iron weapons. Excavations in Taxila have brought to light iron objects like cooking pots or cauldrons, tripedal stands for these vessels, bowls, dishes, saucers, frying-pans, spoons, ladles, a sieve, scale-pans, lamps, candelabra, an incense-burner, wheeled braziers, shovels, bells, locks, keys, lock plates, a folding chair, an axle of a spinning wheel, swords, daggers, spears, javelins, arrow-heads, an armour, a helmet, a shield, bosses, bits and check-bars of horse-bridles, elephant-goads, axes, adzes, chisels, knives, a chopper, a saw, tongs, finger-rings, scissors, hammers, picks, anvils, nails, nail-bosses, hooks, clamps, staples, hinges, chains, spades, spuds, hoes, weeding-forks, sickles and other miscellaneous articles. The articles listed above give us a clear picture of the stage which iron and steel industry had attained in this period.[3]

Strabo writes that in royal processions attendants, wearing full dress, carried a large number of costly articles including "drinking cups and lavers of Indian copper, most of which are set with precious stones such as emeralds, beryls and Indian carbuncles."[3] InTaxila, Marshall has unearthed many articles of copper, bronze and lead—bracelets, bangles, armlets, ear-rings, pendants, brooches, buckles, clasps, a large number of dies for personal ornaments, unguent pots and bowls, mirrors, antimony-rods, tooth-picks, ear-cleaners, hair-pins, finger-rings, antimony-phials, stoppers, jewel caskets, cooking pots, cauldrons (*dēg*), handled jugs and ewers, standard drinking cups, goblets, beakers, flask-like vases, cups, dishes, bowls, saucers, frying-pans, mixing pans, basins, ladles, spoons, incense-burners, standard incense bowls, inkpots, pens, bells, keys, surgical and other instruments, tools, hinges, clamps, handles, chains, door ornaments, finials of votive stupas, figurines and miscellaneous objects.[1]

---

[1] *The Tamils Eighteen Hundred Years Ago*, p. 130.

[2] Ibid., p. 134.

[3] *Taxila*, II, pp. 540-561. [4] Strabo, Tr. Bhon, III, 117.

Strabo has mentioned among the articles carried in processions vessels of gold, large basins and goblets, an *orgulia* in breadth. Archæologists have not yet recovered any vessels of gold. Marshal has unearthed many pieces of silver ware : jugs, scent-flasks, goblets, bowls, cups, dishes, plates, rectangular plates on legs, *paterae* of repousse or incrusted silver, ladles, spoons, strainers, lids for large open-mouthed vessels etc.[2]

As for jewellery, in the Tamil literature of this period we have several passages giving some details about the jewellery of the rich and the courtesans. The Pāndya ruler wore a conical crown set with precious stones, anklets of gold on the right leg (a special distinction of royalty) and a necklace of pearls or precious stones, and an umbrella with pearl strings was held over his head.[3] Nobles of the Tamil country put on a necklace of gems or pearls and massive armlets made of gold. The jewels on the body of a chieftains's son is given in a contemporary work. "On his feet are anklets made of a row of tiny bells hanging from a double cord or twist of gold. Round his waist is a belt of gold coins and a string of bright coral beads and under these is a fine muslin tied round the loins. On his arms are two arm-rings, handsomely engraved, with fret-work raised like the eyes of a crab. From his neck hangs, a double cord of gold with a toy axe, and a brooch bearing the figure of a bull, strung on it. On his head is a triple cord of pearls and golden beads, and above it a wreath of flowers wound with a string of shining blue beads."[4] In the cool hours of the evening the noblemen (of Madura) drive out in splendid chariots drawn by horses or ride on ambling steeds which are trained to special paces. Each is attended by a number of his footmen who run on either side of the chariot. These lords are clad in red coloured garments. Their swords hang by their sides in scabbards ornamented with gold, and on their breasts dangle garlands of flowers."[5] Their ladies wearing sounding ankle-

---

[1] *Taxila*, II, pp. 575-604.

[2] Ibid., pp. 611-614.

[3] *The Tamils Eighteen Hundred Years Ago*, p. 110.

[4] *Kalith-thokai*. s. 85.

[5] *Maduraik-Kānchi*, *ll*. 357 seqq.

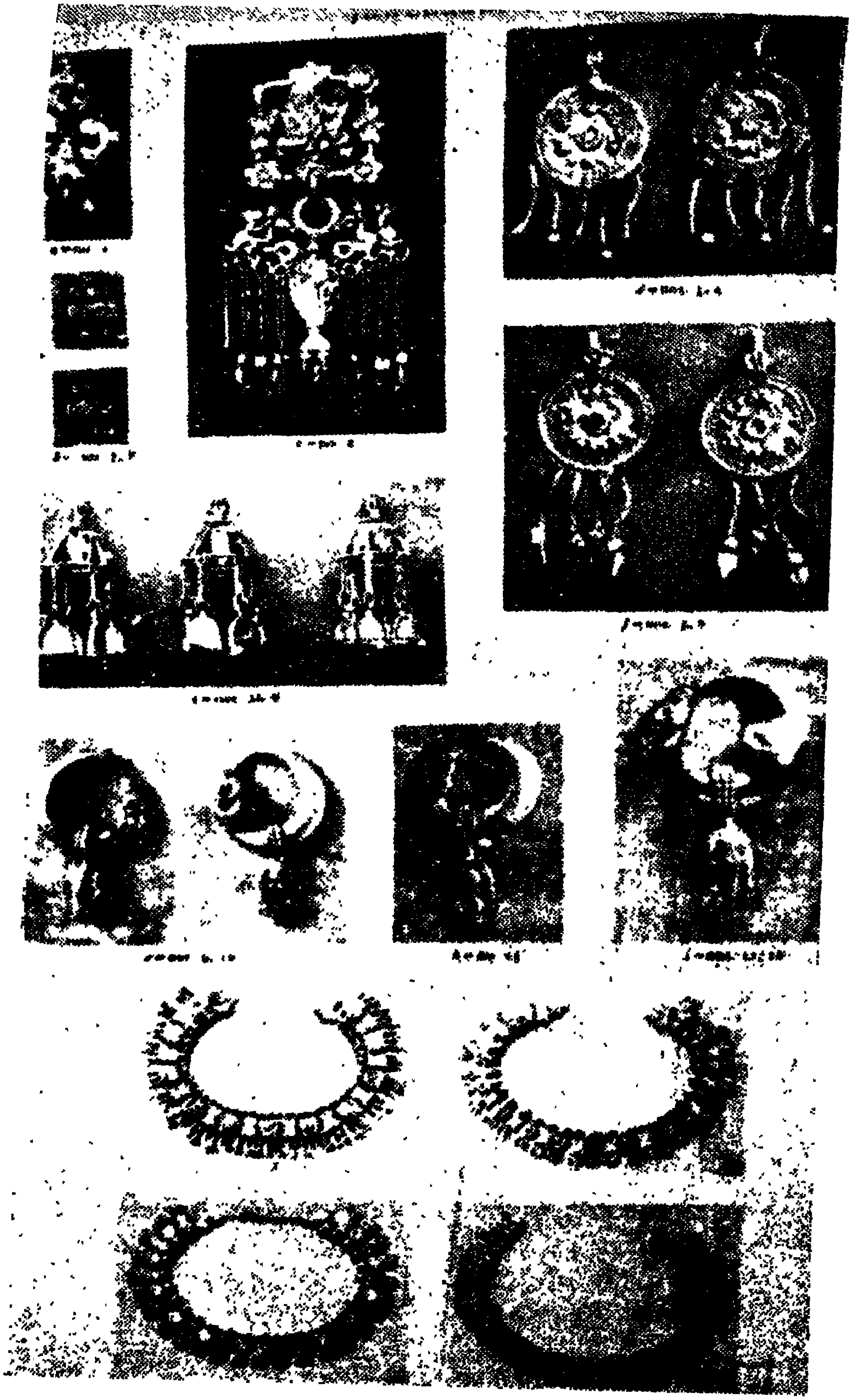

Plate XVIII

Some of the Jewellery of the Period

(*Taxila*, Vol. III, Plates 90 and 98) rings and golden bracelets appear on the high terraces of their mansions and their perfumes spread fragrance through the streets."[1] Other passages of the *Maduraik-kānchi* speak of "women wearing glittering jewels" and "harlots decked with jewels and flowers." Madura in those days had a street called the jeweller's street.

Excavations in Taxila have yielded a large number of gold and silver jewellery—necklaces, ear-pendants, ear-rings, girdles, breast-chains, belts, amulets, pendents, broaches, hair-pins, bangles, bracelets, torques, finger-rings. Besides, finger-rings of lead, stone, shell and glass have been unearthed.[2] Combs and antimony-rods of ivory as well as seals with Brāhmī inscriptions have been brought to light at Ujjain datable to the 3rd or 2nd century B. C.[3]

A large variety of gems and other precious materials have been mentioned by Tamil and Roman writers and in the writings of the North. Roman authorities mention pearls and beryl from South India and diamonds, sapphires, turquoise, and lapis lazuli from the sub-continent. The *Maduraik-Kānchi* reports emeralds, rubies, sapphires, topaz, lapis-lazuli, onyx, lustrous pearls and bright red coral beads as being sold in the jewellers' market at Madura.[4] The *Arthasāstra* mentions several precious gems. Marshall has excavated in Taxila an oval intaglio of malachite, nine of jacinth, two of glass, one of carnelian and one of chert.[5] Precious gems are the least likely to be left behind to oblige the archæologist.

The same area has yielded a large number of bone and ivory objects such as personal ornaments, articles of toilet, minor domestic articles, gamesmen and playthings, arrow-heads and check-bars of horse bridles, besides shell bangles. Nearchus mentions ear-rings of ivory. Lower class women in the Tamil country wore bracelets made of the conch shell, a necklace made of white and blue beads and cheap trinklets.

Cloth Manufacture

Herodotus mentions marsh-dwellers who were dressed in garments made of some sort of water-reed. From this form of covering the body by people cut off from the current of civilization, there prevailed, among the people dwelling in cities, the highest type of dress worked in gold and ornamented with precious stones. The rich wore flowered garments of the finest muslin. Nearchus mentions flowered muslins of bright colours.

---

[1] *Maduraik-Kānchi, ll.* 431 seqq.

[2] *Taxila*, II, pp. 620-650.

[3] *The Statesman*, dated 9th August, 1958.

[4] *Maduraik-Kānchi, ll.* 489 seqq.

[5] *Taxila*, II, page 650.

Cotton cloths made in India became world famous. Arrian writes that the cotton cloth worn by Indians had a brighter white colour than any cotton found elsewhere.[2] The Romans compared the cotton cloth imported from the Pāndya country to 'sloughs of serpents' and 'vapour from milk'. The *Jātakas* extol the cloth made in Benares and the Sivi country. The Malavas and their allies presented a large quantity of cotton cloth to Alexander the Great. Kautilya describes the cotton industry in detail and records that Aparānta (Konkan) Kalinga, Benares Vanga, Vatsa (Kausāmbī region), Mahisha and Madhurā (Madura, the Pāndya capital) produced the finest cotton fabrics.[3] The excellence of the cotton cloth made at the last mentioned city is spoken of by Roman writers as a "fine texture the thread of which could not be followed even by the eye." Kautilya speaks about *Kausheya* from Chinabhūmi, woolen blankets from Nepāl, made of eight pieces, black in colour and rainproof. In the Tamil literature of about the beginning of the Christian era mention is made of thirty varieties of indigenous silk. The author of the *Arthasāstra* reports a fibrous fabric called *dukula* of three colours—white, black and ruddy like the rising sun. Linen cloth from Benares and Pundra and *patrorna* (leaf-wool), from Magadha, Pundra and Suvarnakudya are reported by the same authority. The Brāhmī record of Mahastān of the Maurya period refers to Pundra Nagara, a prosperous city of Bengal having a storehouse full of coins known as *gandakas* and *kākanikas* mostly due to its textile industry. The *Periplus* and Ptolemy indicate that Gange was a great market town on the bank of the Ganges and produced the finest muslin.

Other Arts and Crafts

Remarkable progress appears to have been made in arts and crafts during this period. The *Jātakas* mention the traditional eighteen crafts such as those of wood-workers, smiths, leatherers, painters, workers in stone, ivory, weaving, confectionery, jewellery, and precious stones in addition to potters and makers of bows and arrows.

We have references to a large number of professionals ; the husbandman, the neatherd, the shepherd, village servants of different categories such as the potter, the blacksmith, the carpenter, the barber, etc., the labourer, the craftsman, the trader, the inspector ; officials

[1] McCrindle, *Megasthenese and Arrian*. p. 219.

[2] *Arthasāstra*, Book II, Chapter. 2.

such as *kāru silpin*, *vaidehaka*, *adhyaksha*, and *yukta* ; the workers and dealers in precious metals and textiles. Indian physicians have been highly praised by Strabo who is very critical of the efficiency of other workers. Other professionals who have been mentioned are the singer, the actor, the rhapsodist, the dancer and the sooth-sayer. The traders were partly state officials in charge of royal merchandise, shop-keepers, the travelling merchants, the rich *sreshthins* or *seths*. In the Tamil literature of the period mention is made of physicians, astrologers, soothsayers, ministers, judges with a peculiar headgear, the sage *(arivan)* with esoteric powers, the farmer, *(ulavan)*, the landed estate holder (*vellālan*), the shepherd (*aiyan*), the huntsman (*vedduvan*), the perfumer, the garland-maker, the royal bodyguard, betel-bearers, arecanut-servers, armourers, dress valets, torch-bearers, heralds,[1] horsemen, infantrymen, elephant corpse, grooms, servants, scavengers, policemen, spies and watchmen. The public walks of Madura are reported to have been "filled with a motely throng of chank-cutters, bead-makers goldsmiths, coppersmiths, tailors, weavers, painters and dealers in perfumes and flowers, "who move about the streets and dispose of the things they have brought for sale."[2] We have further reports of Hindu priests, Buddhist monks, musicians, dancing girls, prostitutes and keepers of hotels and restaurants, serving luscious fruits such as the jack, mango, plantain, sugar candies, tender greens, edibles, jams, sweetened rice or savoury preparations of meat.

In the workshops and in the prisons, which used to be periodically emptied, artisans were engaged on contracts or, in penal tasks. There was a 'spinning house' to provide work for widows and destitute women. Prostitution was a recognised institution. Accomplished women taking to the profession could earn much. They were also employed in the royal household on a big salary. They held the royal umbrella, golden pitchers and fan and attended upon the ruler. They were also employed in the storehouse, kitchen, bathroom and the *harem* of the king.

Nearchus speaks of the cleverness of the Indian craftsmen. They saw sponges used for the first time by the Macedonians and immediately manufactured imitations of them with fine thread and wool, dyeing them to look the same. Other Greek articles, such as the scrapers and oil-flasks used by athletes, they quickly learned to make. For writing letters, they used some species of fine tissue closely woven. He also mentions umbrellas and high-heeled shoes of white leather.

---

[1] *The Tamils Eighteen Hundred Years Ago*, pp. 110-114.

[2] *Maduraik-kānchi*, *ll*, 511 seqq.

According to Megasthenes, those who manufactured implements of war paid no taxes, but on the other hand, received a subsidy from the royal exchequer. Certain advanced types of war implements seem to have been manufactured. To cause a craftsman the loss of his eye or hand was punished by death.

The menial work of house life was done by slaves and half-breeds who also did most of the village labour and served as petty craftsmen. In towns and cities of South India women of the poorer classes were employed as hawkers, vendors and shop-keepers or as servants in rich households ; and in the villages all over India they worked in the fields and gardens along with men. The lower crafts *(hina-sippas)* were those of hunters and trappers, fishermen, butchers and tanners, whose work was tainted with destruction of life ; snake charmers, dancers, musicians, rush-weavers and the like.

There was localisation of industries. Mention is made of villages of potters, woodwrights, or ironsmiths producing articles like razors, axes, ploughshares, goads, and needles ; of trappers supplying game, skins, ivory and the like. The same localisation is observed in towns where different handicrafts were settled along their own streets or in their own areas. We hear about ivory workers' streets *(dantakāra-vīthi)* the dyers' street or the weavers' locality *(thān)*. The same was the case in South India.

State control over trade and industry was established. Mines of gold, silver, copper, lead, tin, iron, bitumen *(silājatu)*, diamond, gems and precious stones were nationalised. Fisheries of pearl, mother of pearl, conch-shell and coral *(pravala)* were maintained and their exploitation controlled by the state which also engaged itself in extracting minerals from ores. The state had a monopoly in the manufacture of salt. It had its own factories for cotton, oil, sugar, wines and liquors. Boats, ships and armaments were manufactured by the state. Mints were under a Mint-master who took bullion from the public and struck it into coins on payment of a seignorage. The state had a large number of spinning houses which turned out large quantities of yarns of cotton, silk, wool and jute. They also manufactured mail-armour *(varma)* blankets, curtains, and ropes.

Wages and prices

As to the share of the cultivator in the produce of his labour, it appears to have varied according to the status of the cultivator, the proportion of financial expenses which he could bear in connection with the cultivation of the land and his ability to provide the implements and animals required. Nārada gives one-tenth of the produce to the cultivator.[1] Brihaspati allows one-fifth[2] and to a cultivator of a superior category one third, i.e., to one who could meet all the expenses connected with the cultivation, supply manure, provide the bulls etc. Dr. Gopāl is able to make out a case for one-fourth of the produce as the wage of the labourer. We shall not be far wrong if we assert that the wages pure and simple varied between one-tenth and one fourth according to the nature of the land—one-tenth for cultivating the land which was later classified as *polaj* and one-fourth for *banjar*. The rate could not have been uniform in the case of all classes of land. In certain cases, in which a high caste cultivator could provide the manure, implements and animals required for cultivation, his share was even as high as one-half of the produce.

During the Epic period, if a herdsman tended six cows, he received the milk of one ; and if he tended a hundred heads, he was, at the end of the year, entitled to receive a pair. If a man acted for the master as a herder of flocks or as an agricultural labourer, he got one-seventh of the increase in the flock or the produce of the land. There were arrangements by which the tender received one-sixteenth of the herd.[3] According to Manu, the tender of cattle got the milk of one cow out of ten.[4] If a man worked without food or clothing given to him, he might take a third of the produce, otherwise a fifth.[5] But Nārada[6] and Yājnavalkya[7] give a general rule to the effect that the servant of a trader, a herdsman and an agricultural servant shall respectively take a tenth part of the profit, increase or produce. This is the wage fixed by the king in case there had been no special stipulation between the master and his man. Hence, it represents the normal wage for the hired assistant of a petty merchant, herdsman or farmer. There seems to have been a caste discrimination even in the matter of wages. The Sūdras got a lesser wage whereas the son of a warrior by a slave-girl got something more. Persons of the 'mixed caste' really did most of the general work of the village. According to the commentator on Vishnu,[8] the practice of renting land for half the crop also existed. In such cases the renter was of a 'mixed caste'.

If a number of men do a work under a headman, the latter got a double share. So too, among musicians, he who beat time got a half share more. A rathin or carman's wage was one thousand coppers a month.[1] The widows of soldiers who were killed in battle were granted a pension by the king even if the number of widows was three.[2] The king got one-sixth of the booty, the captain of the raid got four shares, the bravest three shares, one particularly clever two, the remaining associates sharing alike.[3] As much land as sufficed for one family was the remmuneration of the *grāmika* or the lord of one village. The lord of one thousand villages was allowed the revenue of a town.

---

[1] Nārada, VI, 2, 3.

[2] Brihaspati, XVI, 1-2.

[3] *Mahābhārata*, XII, 60, 24 seq.

[4] Manu, VIII, 231.

[5] Brihaspati, XVI, 13.

[6] Ibid., VI, 3.

[7] Ibid., II, 194.

[8] Vishnu, LVII, 16.

Dr. M. H. Gopāl has prepared the following list of the annual salaries of public servants in *panas* each of which he equates with a shilling : the sacrificial priest, household priest, principal preceptor, heir apparent, queen mother, queen and ministers 48,000 each ; collector-general, door-keeper, superintendent of the *harem* and the chamberlain 24,000 each ; the chief constable, officer in charge of the city, superintendent of law or commerce, superintendent of manufactories, members of the council of ministers, superintendent of country parts and boundaries, other princes and the prince's nurse 12,000 each, commissioners 8,000 each, the guards of elephant forests and those of timber forests 4,000 each ; superintendents of departments, some spies, the foreteller, the reader of omens, the astrologer, the bard, the retinue of priests and the king's charioteer 1,000 each ; playmates of the king, the sorcerer, attendants, teachers, learned men and the miners of mountain 500 to 1,000 each ; spies and musicians 250 each ; artisans and carpenters 120 each, servants in charge of quadrupeds and bipeds, workmen doing miscellaneous works, procurers of free labourers and members of the bodyguard 60 each.

We are able to gather that one or two *kahāpanas* could purchase a fawn, eight pieces could bring a fine ass and 24 a pair of oxen. The price of an average horse was one thousand pieces ; but a thoroughbred foal was valued at 6,000.[4] One hundred pieces could buy a very average slave or slave-girl.[5]

Guilds

According to R. C. Majumdār, there was a certain amount of co-operation among the traders about the middle of the first millennium B. C. due to the instinct of self preservation. They had to traverse long distances ; and single handed "they were no match either for the highway robbers, or the hostile tribes who were ever ready to seize their goods".[1] In the later literature we come across the term *sreni*, which occurs in the inscriptions of the period also. It is defined as a corporation of people following the same trade or industry.

---

[1] *Mahābhārata*, II, 5, 54.

[2] Ibid., II, 61, 20.

[3] Brihaspati, XIV, 32.

[4] *Muga Pakkha Jātaka*, No. 538.

[5] *Jātaka*, 627.

It appears that here and there some art or craft in a locality formed a guild-organisation under a *Jetthaka* (Alderman) or *Pramukha* (President). The guild which often took the form of a sub-caste possessed both executive and judicial authority and had for this purpose one or more executive heads who were entitled to arbitrate between its members, especially between the husband and the wife.

Many passages in Kautilya's *Arthasāstra* indicate the great wealth and importance of the primitive caste guilds, for which separate quarters were reserved in an ideal town-planning. Some guilds served as banks and received permanent deposits, undertaking to devote the annual interest for specific charities. These guilds can, at their best, be said to correspond to the religious guilds of Europe whose functions were partly religious and partly economic in character.

It is through their caste guilds that the king summoned the people on important occasions. In the *Maga Pakkha Jātaka* there is a reference to the king assembling the eighteen castes,[1] and four of these we know by name.[2] The following categories of workers are mentioned in the literature of the period : (1) workers in wood—carpenters, cabinet-makers, wheelwrights, builders of houses, of ships and vehicles of all sorts,[3] (2) workers in metal—makers of weapons and tools of all kinds ; this category included blacksmiths, coppersmiths and goldsmiths, (3) workers in stone, who laid foundations for the houses, carved pillars and bas reliefs, and even did finer works such as making a crystal bowl or a stone coffer,[4] (4) weavers, who made cloths for local use, muslin for export, made silk cloth, blankets, rugs and different kinds of coverlets and carpets, (5) leather workers, who made foot-covering and sandals worn by the people mostly in cold weather ; and also the embroidered and costly articles of the same kind mentioned in the books,[1] (6) potters, who made all sorts of dishes and bowls for domestic use and often hawked their goods about for sale, (7) ivory workers, who made a number of small articles in ivory for ordinary use and also costly carvings and ornaments,[2] (8) dyers, who coloured the clothes made by the weavers,[3] (9) jewellers, some of whose handiwork has survived and is also often represented in bas reliefs, enabling us to know fairly well the shape and size of the ornaments they made, (10) fisher-folk who fished only on the rivers, there being no mention of sea fishing, (11) butchers, whose shops and slaughter-houses are several times mentioned,[1] (12) hunters and trappers mentioned in various passages as bringing animal and vegetable products of the woods, and also venison and game for sale on carts into the city,[2] (13) cooks and confectioners, a numerous class, (14) barbers and shampooers, who dealt in perfumes, and were especially skilled in arranging the elaborate turbans worn by the wealthier classes, (15) garland-makers and flower-sellers[3], (16) sailors, occupied mostly in the traffic up and down the great rivers, (17) rush-workers and basket-makers,[4] (18) painters,[5] who were mostly house-painters.

---

[1] J.R.A.S. (1901), p. 863.

[2] Ibid., p. 865.

[3] Ibid., p. 864.

[4] Ibid.

Most of these professions could not have been organised into conscious economic guilds in this period. But it is quite possible that some of them were organised into caste guilds having an economic function as well. We learn about such guilds of trade in the Deccan also. They were those of weavers, druggists, corn-dealers, oil-manufacturers etc. They received permanent deposits of money and paid interest on them from generation to generation.[6]

In the Tamil literature of the period we get references to castes of jewellers, oil-manufacturers, carpenters, bangle-makers and grain merchants. As a matter of fact, caste organisation, having a semblance of early guilds of a religious type, was a necessary product of the economic stage of this period when private property got consolidated and society was well set on its way to feudalism.

Caravan traffic, with the special dangers and difficulties to which it was exposed, called for co-operative organisations. Different merchants, with their carts loaded with their goods and their men, made up a company under a common captain called *Sātthavāha*, who gave them directions as to halts, watering places, routes, fording and danger spots. The guide was called *Thala-niyyāmaka* or land-pilot who conducted the caravans safely against the dangers and difficulties of travel from "droughts, famine, wild beasts, robbers and demons." There were quasi-military corporations like those of the modern Brinjāras, whose business was to supply merchants and others with armed protection.

---

[1] J. R. A. S. (1901), p. 873.
[2] Ibid., p. 866.
[3] Ibid.
[4] Ibid., p. 868.
[5] Ibid., p. 865.
[6] R. G. Bhandarkar, *Early History of the Deccan*, (Calcutta, 1928), p. 75.

Inland Trade

Trade was active, various and minutely regulated. The king himself was a great trader, disposing of the output of his factories, workshops and prisons, and the produce of his lands, forests and mines for which he maintained storehouses *(koshthāgāra)* throughout the country. The king's trade agent was called *rāja-vaidehaka.* In particular, the king reserved the right of coining and other work in silver and gold, which was executed by his officials on behalf of those who brought their metal.

The market was controlled by a board of officials, and another board inspected the manufactured goods and provided for the sale with a distinction of new and second-hand articles. Prices of commodities were fixed at different times and places, by the haggling of the market. The product of the country was subject to control ; and to ensure that nothing might escape, there was prohibition of purchase in part or in bulk at the place of origin, in farms, orchards and gardens. For the king had the right of priority of sale of his goods. The quantity and price of all goods were declared and sale was by auction, the enhancement acruing going into the treasury. Combinations to affect prices were punishable. An army of spies was engaged on the routes in order to detect false declarations. The price of ordinary goods were fixed every fortnight.[1] All weights and measures were subject to inspection. Besides the coins, there was a very considerable use of instruments of credit. The great merchants in the few large towns gave letters of credit on one another. And there is constance reference to promisory notes.

Movement from one part of India to another was difficult. Taxes and octroi duties had to be paid at every stage ; and a heavy item in the cost of transporting merchandise was the hire of volunteer police to protect caravans against robbers on the way. The cost of such carriage being great, only the more costly goods used to be carried to distant parts of the country or abroad. Silk, muslin, the finer sorts of cloth, cutlery, armour, brocades, embroidery picees, rugs, perfumes, drugs, ivory, ivory works, jewellery and gold were the principal trade articles between different parts of India. Moreover, foreign articles imported into one part of the country were carried to other parts for sale. Inspite of the enormous expenses involved in carrying commodities of trade from one place to another, we have two cases on record in which a profit of 200 and 400 per cent was reaped by the masters of the caravans on one journey.[2]

---

[1] Manu, VIII, 12.

[2] Jātaka, I, 109 ; IV, 2.

Merchants conveyed their goods up and down the great rivers, along the coast in boats, or right across the country in two-wheeled carts drawn by two bullocks, travelling in caravans. In Tamil Nād, "Caravans of merchants travelled from town to town escorted by soldiers. The principal thoroughfares in the interior of the country were guarded by the King's soldiers and tolls were levied on these highways."[1]

Rhys Davids has made out the following trade routes : *North to South-west* :—Sāvatthī to Patitthāna (Paithan)—Patitthāna-Māhissetī-Ujenī-Gonadda-Vedisā-Kosāmbī-Sāketa-Sāvatthī. *North to South-east* :—Sāvatthī to Rājagaha. The route lay along the foot of the mountains to a point north of Vesālī and then turned south to the Ganges. The stopping places beginning from Sāvatthī were Setavya, Kapilavastu, Kusināra, Pāvā, Hatthigama, Bhandagama, Vesālī, Pātaliputra and Nālanda. The road probably proceeded from Rājagaha to Gaya, and there meeting another route from the coast, possibly at Tamralipti, proceeded to Benares.[2] *East to West* :—The main route was along the great rivers along which boats plied for hire. We even hear of express boats. Upwards, the rivers were used along the Ganges as far west as Sahājati[3] and along the Jumna, as far west as Kosāmbī. Downwards, in later times at least, the boats went right down to the mouths of the Ganges and thence to Burma (the port of Thuton near Rangoon). According to Warmington, the Āndhra kingdoms were joined to the North and West by two ancient tracks. One started from Mesulipatam and the other from Vinukonda. They met near Hyderābād (Deccan) and continued through Ter, Paithan, Dawlatābād, Chandore, Markinda, to Kalyāna and by a difficult way through the Western Ghats to Broach.[4]

In addition to the above, we are told of traders going from Vidēha to Gandhāra,[5] from Magadha to Sovīra, from Bharukachchha round the coast to Burma.[6] Pilots in the sea as well as in the desert are reported to have been guided by the stars. Trade was both inland and foreign. We learn about prince Mahājanaka sailing from Champa to Suvarnabhūmi and read of passengers safely brought by ships from the sea by river up to Benares, of traders coasting round India from Bharukachchha on the West to Suvarnabhūmi in the East, touching on the way a port in Ceylon ; of a newly arrived ship laden with cargo which was bought up at the landing place by a hundred waiting and competing merchants.

---

[1] *The Tamils Eighteen Hundred Years Ago*, p. 109.

[2] *Vinay Texts*, I, 81.

[3] Ibid., III, 382.

[4] Warmington, *Commerce between Roman Empire and India*, p. 32.

[5] *Jātaka*, III, p. 365.

[6] Ibid., III, p. 188.

Markets

We get some details of the markets. There was a market for fish at a gate of Srāvastī, of green groceries at the four gates of Uttra-Panchāla and of venison at the cross-roads outside Benares. There were four *nigamas* or market places located at the four suburbs of the city of Mithilā. Such a market is figured on a sculpture at Bhārhut. Within the towns were located workshops and bazaars. A shop was called *Āpana* and a stock godown or store was called *antarāpana*. There were shops for sale of textiles, groceries, oils, grain, green groceries, perfumes, flowers, works of gold and jewellery and taverns for the sale of liquor. We get a description of the market at Madura in a long poem of this period by Marudan. In the great market of Madura, "which is held in an extensive square, are exposed for sale, carts, chariots, and ornamented chariot steps ; coats of mail, and metalic belts which cannot be cut ; leathern sandals and fly whisks made of white tail of the yak ; strong spears and carved clubs ; elephant goads and shields to protect the face of elephants ; various articles made of copper and of brass ; saws and lathes and other tools ; pretty garlands of flowers and fragrant pastes to be burnt as incense or rubbed on the body, and other articles, too many to be set forth. In the jewellers' street are sold diamonds of four kinds known to merchants, emeralds, rubies, saphhires, topaz, lapis lazuli, onyx, lustrous pearls and bright red coral beads. The gold merchants. who live in a separate street, sell the four varieties of that precious metal known as *satarūpam*, *kilichchirai*, *ādakam*, and *sambunātham*. Cloths of various clours and patterns, made of cotton, wool or silk are exposed to view, folded and neatly arranged in rows, to the number of several hundreds in each clothier's shop."[1]

During the pre-Mauryan period prices were not fixed but settled by haggling. Under the Mauryas the state controlled the trade and prices. Goods were not to be sold at the places of production, but at market places under the eye of government officials. The Superintendent of Commerce fixed the wholesale prices of goods. Workmen's strikes were forbidden. Collective obstruction was known and penalised.

---

[1] *Maduraik-Kānchi, ll.* 489 seqq. ; *The Tamils Eighteen Hundred Years Ago*, pp. 184-85.

Weights and Measures

The most ancient unit of measure in India was the *rati* or *gunja* seed (Carbrus Precatorius), 8 of which appear to have constituted the unit of measure (.8565 gramme), as determined by Hemmy, in the early Indus valley, each *rati* weighing 1.3125 grains troy ; and the system was binary in the case of smaller weights and decimal in the case of larger ones as we have already noted.[1]

The medium of weight during this period was the seed of *māsha* (Phraseolus Radiatus) which is equal to ½ *rati*. 10 māshas or 5 *ratis* constituted the unit of weight and was known as the *māsha*. Sixteen māshas or 80 *ratis* were equal to a *kārshā*. Four *kārshās* or 320 *ratis* weighed one *pala*. The description of the balance called *samavritta* had the following scales : 5, 10, 12 (12½), 15, 20, and so on upto 100 *palas*. Five *palas* and the multiples thereof being marked with a *nandī* (*swastika*). A *pala* had 10 *dharanas* of 32 *ratis* each ; 100 *palas* were equal to ½ *drona*.[2] The unit of measure for weighing firewood was 25 *palas* (8,000 *ratis*) which was exactly the weight of a modern *sēr* of 80 *tolas* or slightly more than two English pounds. Eight such units made one *drona* (200 *palas*), sixteen *dronas* made one *vāri* (128 *sērs*). Twenty *dronas* made one *kumbha* (*160 sērs*=4 maunds of about 80 and odd pounds avoirdupois each) and 20 *Kumbhas* made one *vaha*[3] (80 maunds).

Cubic measures were used for selling grains, fruits, bran, charcoal etc. The unit of measure was the *kudumba*. Four *kudumbas* made one *prastha*, four *prasthas* made one *ādhaka* and four *ādhakas* made one *drona*. The *kudumba* was the unit for measuring liquids also. Sixteen *kudumbas* made one *ghatika* and four *ghatikas* made one *wāraka*.[4]

The lineal measures used were as follows :—8 atoms made one particle, 8 particles made one *liksha* (egg of a louse), eight *likshas* made one *yūka* (louse), 8 *yūkas* made one *yava* (barley grain) and 8 *yavas* made one *angula* (¾ths of an English inch). 14 *angulas* made one *pada*, two *padas* made one *hasta* (cubit) and three *hastas* made one *vyāma*. Further, 12 *angulas* made one *vitasti*, four *vitastis* made one *aratni* and four *aratnis* made one *danda* (of 192 *angulas* for measuring lands to be gifted to Brāhmanas). Again, 54 *angulas* made one big *hasta* (yard for measuring forests) and two such (big) *hastas* made one *dhanus* (108 *angulas* or 81 inches or 2.25 yards) used for measuring roads. 1,000 *dhanus* made one *goruta* or *krosa* (2,250 yards about 1.28 miles) and four *gorutas* made one *yojana* (5.11 English miles).

---

[1] See supra, p. 41. [2] *Arthasāstra*, Book II, Chapter 19. [3] Ibid.

[4] Ibid. It is possible to determine the actual sizes of these measures ; for, from Kautilya we learn that one *ādhaka* of water passes out of a pot, through an aperture of the same diameter as that of a wire of 4 *angulas* (3 inches) in length and made of 4 *māshas* (20 *ratis*) of gold, in a *nālika* (24 minutes) ; but it requires a careful and accurate experiment. *Arthasāstra*, Book II, Chapter 20.

The unit used for square measure was a *danda* of 112 *angulas* or 7 feet. 10 square *dandas* made one *rajju*, two *rajjus* made one *paridesa* and four *paridesas* made one *nivartana*.

For measuring time, 5 *nimeshas* (.24 second each) made one *kāshtha* (1.2 seconds), 30 *kāshthas* made one *kala* (.6 minutes), 40 *kalas* made one *nālika* (24 minutes) and two *nālikas* made one *muhurta* (48 minutes) and 15 *muhurtas* made one day or night (12 hours).

Foreign Trade

A net work of trade routes connected India with important centres in Asia. There are figures of Indian apes and elephants on the oblisk of Shalmaneser III (860 B. C.). Logs of Indian (Malabār) teak are found in the temple of the Moon at Mugheir (the Ur of the Chaldæans) and in the palace of Nebuchadnezzar both belonging to the 6th century B. C.

We have clear evidence that there was regular commercial intercourse, both by land and sea, between India and China long before the beginning of the Christian era. When the Chinese envoy Chang Kien was in Bactria (c. 127 B. C.), he found to his great surprise that bamboo and textiles from South-Western China were sold in the local market. On enquiry he learnt that these were brought to Eastern India through Yunnan and Burma, and then carried the whole way across North India and Afghānistān. Certain passages in a Chinese text, written in the first century A. D., mention trade relations of China by sea with countries along the Sea of China and the Indian Ocean. One of the places named Huangche has been identified by some with Kānchi in Tamil Nād. Chinese coins (c. 138 B. C.) have been found at Mysore. The word *sindura* (vermilion) and *kichaka* (bamboo) are derived from Chinese *tsin-tung* and *ki-chok*.

Kautilya mentions various articles imported into the country from outside. For instance, mention is made of fabrics of China manufacture, cotton fabrics of Madura (now Madurai), woollen products of Paundraka, various articles from Assam, Ceylon, the Pāndya kingdom, Kerala, Persia, even Barbara, and other countries.[1]

---

[1] *Arthasāstra*, Book II, Chapter 2.

Athenæus reports that in the Egyptian procession of Ptolemy Philadelphus (285-246 B. C.) there were Indian women, hunting dogs, cows and spices carried on camels and that Ptolemy Philopater's yacht had a saloon lined witn Indian stones.[1] Philadelphus built on the Egyptian coast of the Red Sea a port at Myos Hormos in 274 B. C. It became the most important centre for Indian trade.[2] We hear of Indians, sailing for the purpose of commerce, being driven by storms into Germany about 60 B. C. Dio Chrysostom (c. A. D. 117) refers to Indians as forming part of the settled population of Alexandria and notes that they came by way of trade. A gravestone with a wheel and a trident attests to the presence of Indians in Alexandria.[3] There is reference in the Budhist literature to sailors using a shore-sighting bird.[4] One of the *Jātakas* mentions a trading voyage to the kingdom of Bāveru (probably Babylon).[5]

A large number of Roman coins have been found in South India. A work of the Sangam Age speaks of "Yavanas of graceless, harsh speech" who possessed many precious utensils, and large quantities of diamonds.[6] Mention is made of seaport towns (Māmallapuram, Puhār, Korkai), and there is reference to the "activities of busy customs officials engaged in loading and unloading vessels in the harbour." Flags of ships are compared to huge elephants chafing at their posts. From other sources we learn that Palmyra in Arabia and Petra on the Mediterranean Sea constituted famous emporia of Indian trade. Roman writers have spoken of the ports of Bacare (Vaikkarai), Nelcynda (Nīrkunram), Kolkoi (Korkai), Tyndis (Ponnāni) and Cape Comorin (Kumāri). Pliny (A. D. 77) speaks of the emporium of Modoura, the capital oi the 'Pandae' king 'Pandion'.

The news of the accession of Augustus in 27 B. C. quickly reached India. Embassies reached Rome from several Indian states. Strabo mentions a very striking embassy sent by the Pandian (Pāndya king).[7] Many curious details concerning this embassy have been recorded by an eye-witness, Nicolaus of Damascus, who met the party near Antioch. One of the presents the party carried was an armless boy who could shoot arrows and throw darts with his feet. It found Augustus in Samos in 21 B. C.

---

[1] Rawlinson, H. G., *Intercourse between India and the Western World*, pp. 93-94. [2] Ibid., p. 91.

[3] Tarn, *Greeks in Bactria and India*, p. 216. [4] J. R. A. S., 1899, p. 432.

[5] Cowell, English Translation, *Jātaka*, III, p. 83.

[6] *Mullaipāttu*, *ll*. 59-66. [7] Dion Cassius, LIV, 9,58.

There was a very great volume of trade between India and foreign countries. The articles exported comprised many species of gold, silver, spices and cosmetics from all parts of India ; jewels including pearls from South India, Ceylon and other places ; muslin, cotton and silk. Pliny in his *Natural History* mentions diamonds, opals and agate to be products of India. Megasthenes mentions sugar-candy. The other articles of export were perfumes, medicinal herbs, pigments, precious stones (diamonds, sapphires, beryl, lapis lazuli), iron, steel, copper, sandal wood, indigo, ivory, porcelain and tortoise shell. Imports from India drained so much of Roman gold that the Senate laid an embargo on certain articles of Indian origin.

The chief articles of export from Tamil Nād were fine muslin and jewels, especially beryls (*Vaidūrya*)[1] and pearls. Drugs, spices and condiments, as well as *costus lycium* and other cosmetics fetched high prices. Even greater was the demand for pepper which sold in the days of Pliny at the price of 15 *denarie* (gold pieces) a pound. Sapphire called *kurrandam* in Tamil, and a variety of ruby were also exported from the Pāndya kingdom. The other articles exported from South India were spikenard, betel, diamonds, amethysts and tortoise shell. Cotton cloths exported from the Tamil country are compared to the 'sloughs of serpents' and 'vapour from milk' and are spoken of by the Romans as "fine textures the thread of which could not be followed even by the eye."

The Greek and Arabic names for rice (Orza, *urz*), ginger, (Zinjibar, *zanjabīl*) and cinnamon (Karpion, *qurfah*) are almost identical with their Tamil names, *arisi, inchivēr*, and *karuva*. The trade between South India and Rome received a tremendous filip which culminated about the time of Nero (68 A. D.). Thenceforward it declined till the death of Caracalla (217 A. D.) after which it almost ceased. It revived again, though slightly, under the Byzantine emperors. Under the early Roman emperors there was a great demand for articles of luxury, especially beryl. In the declining period cotton and industrial products were imported by Rome. Under the Byzantine emperors the trade was mostly with the south-west coast.

One of the fashionable extravagances of the time was the consumption of huge quantities of spices at funerals. Even as early as the days of Sulla (138-78 B. C.), we hear of two hundred and ten talents (1,520 lbs) weight of spices being used at his obsequies. The climax was reached in the days of Nero. Pliny writes that India, China and Arabia absorbed between them 100,000,000 sesterces *per annum.*[1] This sum is calculated by Mommsen[2] to represent £ 1,100,000,000 of which nearly half went to India, especially the South. The huge hoards of Roman coins found in Tamil Nād and other parts of India corroborate Pliny.

---

[1] Beryl, which the Romans called *aqua marina* was found only in South India at Padiyūr and Vāniyambādi. America and Siberia, where this stone is found, were unknown regions to the Romans. J. R. A. S., 1904, p. 598.

It was during this period that contact between the Deccan and the rest of the Old World was established. Roman accounts mention a vast trade between the Deccan and Europe through the port of Barygaza or Bharukachchha (Broach). The *Periplus* states that wine was exported to Barygaza. Roman accounts mention Gange, exporting the finest muslin which was much prized by the people of the West.[3]

There was an active trade between the ports of Gujarāt; especially, Barygaza (Broach), and the West in the centuries immediately preceding the Christian era. Wheat, rice, clarified butter, seasame oil, cotton, cloth, honey from the reed called *sacchari* came from Gujarāt for export. Pepper, fine pearls, ivory and silk cloth came from that country as well as the adjoining ones. Transparent stones of all kinds, diamonds and sapphires and tortoise-shell—that from the Chryse Island and that taken among the islands along the coast of Damirke (Tamilakam)—were exported to the Western centres of trade from Barygaza.[4]

India not only exported many valuable commodities but also imported some. Muslin, cotton and silk came from China and Further India. The best horse came from the Indus country and beyond. The foreign merchant had to pay one fifth of the value at the frontier, road taxes as well as tolls, and octroi at the gate of the cities, where the royal officials maintained a douane and watch-house. He was required to be armed with a passport (*mudra*) and severe penalties were prescribed for malpractices connected therewith. The officials recorded "who the merchants are, whence they come, with what merchandise, and where it has been visæd."

Money-Lending

The legal interest for money lent in the *Sūtra* period was five *māshas* a month for twenty *kārshāpanas*. A *kārshāpana* being equal to twenty *māshas*, the rate works to 15% *per annum.*[5] This rate of interest applied to secured loans. But, for persons of low caste, who could not offer any security, the interest was as high as 60% *per annum*. Even in the days of the *Sūtras* the rate of interest varied according to the caste of the borrower ; and the practice was continued in the later periods as well. Loans were given on the security of gold, like a ring, or on the debtor's pesonal guarantee. Money was sometimes lent for interest on promissory notes to be renewed every year. The term used for interest was *vriddhi*.

---

[1] *Natural History,* XII, 18, 41.

[2] *Provinces of the Roman Empire,* II, *p. 300.*

[3] *The Periplus of the Erythraean Sea,* tr. W. F. Schoff, pp. 47-48.

[4] Ibid., pp. 39-45.

[5] Gautama, XII, 29.

Megasthenes erroneously reports that the Indians did not take interest. The practice of charging interest is noticed even in the Rigveda. Possibly the Greek author, while writing, had in mind the provision that no Brāhmana should be a usurer. Non-payment of debt of the most triffling amounts from 100 down to one-half of a *kārshāpana* was punishable, in the case of the poor, with imprisonment.[1]

The method of compelling the debtor to pay was called 'the custom'[2] and consisted in what is now known as *dharna*. The debtor was besieged in his house by the creditor who fasted on him till the debt was collected or the demander died of starvation. Usually the debt was paid to prevent the ghost of the dying creditor from injuring the debtor. Thus, the force of superstition was added to the physical pressure and threat in order to exploit the less fortunate debtors. At least we have one report of a debtor wreaking vengeance on his creditors. A bankrupt invited his creditors to come with their documents only to commit suicide before their eyes.[3] In the Tamil country the creditor used to draw a circle on the ground around the debtor, who should not overstep it until his people cleared the debt for him.

Coinage

The ancient kingdoms of the Nearer East (Sumerian, Assyrian, Babylonian and Hittite) had no coined money, nor had the earlier Achæmenians kingdom of Persia. The Persians learnt the art of coinage from Lydia which they conquered in 546 B. C. The first Persian ruler to strike coins was, according to Herodotus Darius Hystaspes (521-487 B. C.), the monarch who added the Indus valley to the Persian empire.

The coins of the dynasty were *daric* in gold of very pure quality and *siglos* or *shekel* in silver. Twenty of the silver pieces were equivalent to a *daric* which weighed a little more than the English sovereign which weighs 72 *ratis*. The Persian silver pieces were copied, in certain respects, in the square shaped pieces of silver that constitute the oldest coinage of India.

---

[1] *Arthasāstra*, I, 25.

[2] *Jātaka*, IV, 256.

[3] Ibid.

Even after coins were introduced into India, the ancient system of barter and the old use of cows as currency continued. Grain measures were also used as currency in most parts of India. According to Manu, there were three standard coins of gold, silver and copper called respectively the *suvarna*, *dharana* and *kārshāpana*, every one of which weighed 80 *ratis* (one kārshā = 146.4 grains). No specimen of the *suvarna* has been brought to light. A large number of *kārshāpanas* and the multiples and subdivisions of the *kārshāpana* have been unearthed besides specimens of 32 *rati* silver *purāna* or *dharana* along with its multiples and subdivisions. Silver was almost the universal medium of coinage during this age. Gold coins were exceptions to the rule. The ratio of gold and silver in value about this time was 1 : 8 ; and hence the 80-rati *suvarna* should have fetched 20 pieces of 32-*rati dharana* after the Persian system. It is not possible to find out the relation between the *dharana* and the *kārshāpana*. Copper was still a valuable metal and the ratio between it and silver could have been 3 : 1 or about that. There were bronze and copper pieces called *kamsa*, *pāda*, *māsaka* and *kākanika*. In the reign of Bimbisāra or Ajātasatru, at Rājagriha, five *māsakas* were equivalent to one *pāda*. Caury-shells were also used as currency.

These coins were punch-marked and carried symbols or devices of individuals or corporations. Government-issued coins were not yet born. Private individuals could take metals and get them coined at the government mint on payment of the charges. Money was hoarded either in the house, or buried in jars in the ground, or deposited with a friend, a written record of the transaction being kept. A series of silver coins have been found. These are thick slightly bent bars of silver stamped with wheel or sun-like designs (*chakras*), double on the larger denominations and single on the others. Some bear an extra bar or pellet. They represent double *siglos*, half *siglos* and quarter *siglos*. The *siglos* is not represented. Probably these coins belong to the fourth or fifth century B. C. A find near Sultānpur in the Satāra district yielded very old silver coins which are thick and slightly scyphatic. Another class of small coins of unknown denominations has been recovered from the South. Many of these have on them the figure of a bull. The silver punch-marked coins appear to have been stamped by the authority issuing them. One remarkable feature about them is that they show no sign of evolution.

The punch-marked coins have no significant shape. Some are round and others 'angular'. The fians were either cut out of a sheet of metal or cast in globules. The former gave angular, the latter round coins. A few were struck on only one side. A large number has one or two and others many small stamps on the other side of the coins. These small stamps may be regarded as 'shroff' marks. A large variety of symbols has been used such as the sun, the moon, a star, a mountain, a peacock and several kinds of other animals ranging from the elephant to the fish and the scorpion. Besides, several geometrical and flowery designs have been used.

The bulk of the punch-marked coins has been recovered from Northern India, some from Bengal, the Deccan and South India. The Kolāpur find had 192 coins and a gold ring which bore the name of the owner engraved upon it in a Devanāgari character 2,100 years old (nearly the age of Asoka), Nandībhāga. "The authoritiy that issued these punch-marked coins must have ruled the Ganges valley, thrust its way up the tributaries of the Jumna to the West and come along the east coast through Orissa and penetrated far into the Deccan. This is what the find-spots suggest. If we assume that these hoards were buried in a time of war and insecurity, this power must have collapsed about the same time everywhere in its vast empire, for there is a great similarity in the hoards. All these suggest the period of the Maurya empire (which ruled all the regions mentioned and suddenly collapsed everywhere at the beginning of the second century B. C.), for the issue of these coins and the above rough grouping of the find-spots correspond quite well with the distribution of the Asoka inscriptions."[1]

The most reasonable thing to suppose, according to John Allan, is that the punch-marked coins immediately preceded the Scythian and Kushān series when these are all found on the same site ; but it is possible that they continued in circulation down to the Kushān period, and the complete absence of silver coins of the later Saka-Pahlava and Kushān rulers makes this very probable. These sites certainly show that punch-marked coins circulated in the second and first centuries B. C.

The parable of the *Visuddhimagga*[2] telling how a lot of coins would strike different observers is significant. A money-changer, we are told, would know at once at what village, town, city, mountain or river-bank and by what mint-master a coin was struck. This parable tells us that the symbols had very definite meanings to the expert who knew at once exactly where the coins were issued. There is a story in

---

[1] John Allan, *Catalogue of the Coins of Ancient India* (London, 1936), p. LVI.

[2] D. R. Bhandarkar, *Indian Numismatics*, p. 99 seqq ; and p. 147 seqq.

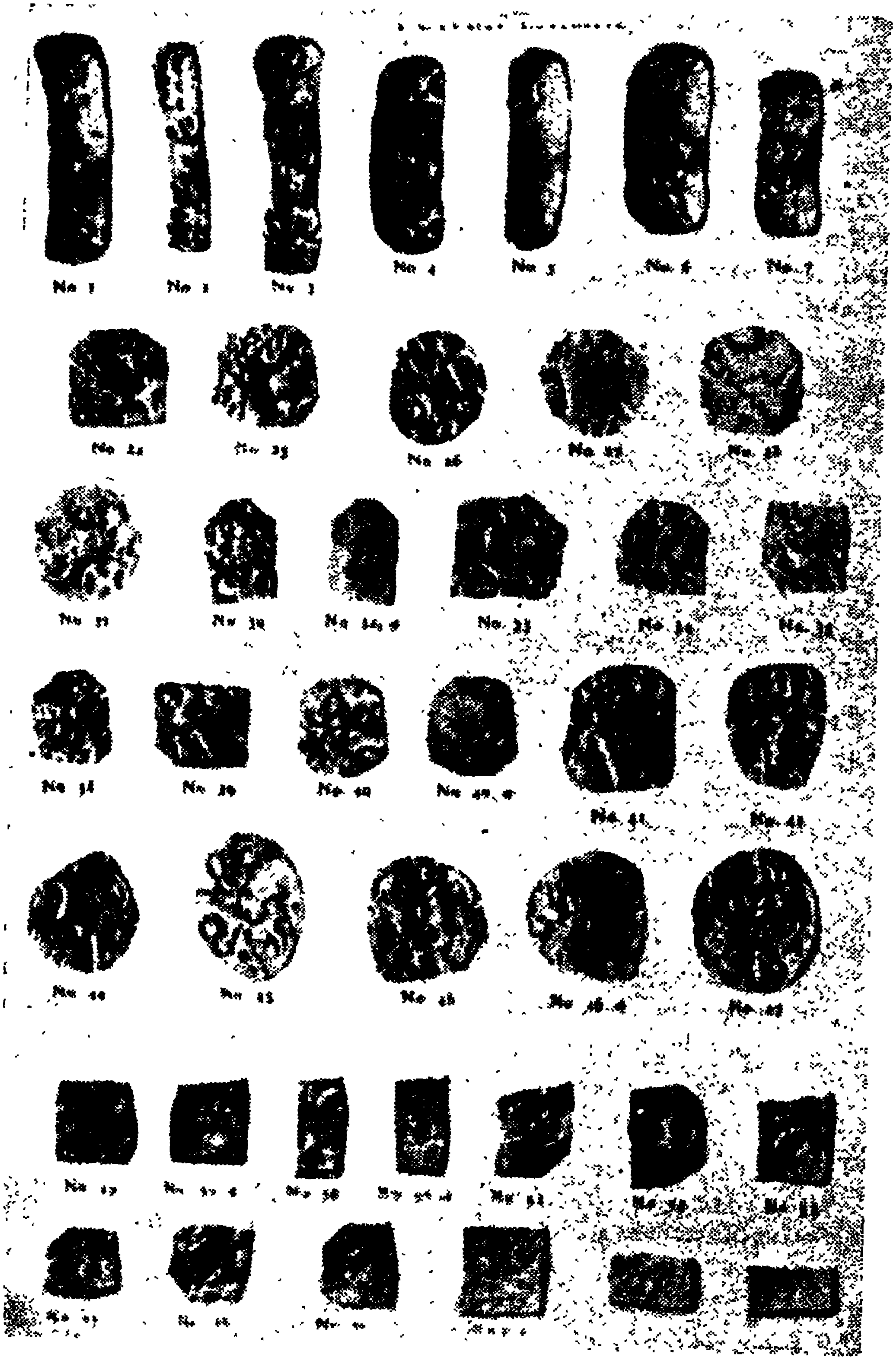

PLATE XIX

Some of the Punch-marked Coins fro
Taxila

the *Mahāvagga.*[1] In connection with choosing a career for Upāli, his mother says, "If Upāli studies coins (learns money-changing) his, eyes will suffer". The use of the word *rūpa* here to mean money is worth noting.

The earliest coins of India were cut from a hammered sheet of metal and clipped to the proper weight. Copper coins, some of which may be as early as the fifth century B. C. were cast. The casting of coins by pouring molten metal into a cavity formed by joining two moulds together must have been a very ancient practice in India. Sometimes the moulds of several coins were joined together for the casting purpose and the joints thus left are not infrequently found still adhering to the coins. Later, striking from dies superseded this clumsy method in the North-West. The earliest die-struck coins, with the device on one side of the coin only, have been assigned to the end of the 4th century B. C. In the final stage of die-striking, devices were impressed on both sides of the coin, and the best of these "double die" coins show not only greater symmetry of shape, either round or square but an advance in the art of die-cutting. This took place about the middle of the 2nd century B. C.[2]

Among the commonest coins of ancient India are the uninscribed cast copper pieces. They have a strong family resemblance with certain common symbols like the elephant, a tree in railing, and the mountain. They are usually found on sites which yield punch-marked silver coins, and are probably of the same period. They are frequently found with Indo-Scythic copper which they must have preceded. The evidence available suggests the third-second century B. C. as their date.

Copper coins with punch-marks are, according to Cunningham, much rarer than silver punch-marked coins. They were found at Madhipur in the Bhāgalpur district of Bihār. Bhāgalpur is the ancient Champa, the capital of Anga, which was incorporated in Magadha in the 6th century B. C. They may possibly be the coins of Anga. But that is not likely in view of the short duration of that kingdom. Most likely they are Magadha coins and were probably in local circulation during the Mauryan period as well.

The great majority of the silver coins of ancient India are full *kārshāpanas* ; halves and quarters are much rarer, and belong to different series, probably outside the Mauryan empire. Very small silver coins are known weighing from 2 to 3 grains. These are 1/16 *kārshāpanas* or *krishnālas*. Eight long bars, five of silver and three of copper, have been unearthed in Taxila which must date back to the fourth or possibly the fifth century B. C. "Probably we shall not be far from the truth if we put the issue of these, the earliest types of punch-marked coins, round about 400 B. C."[1] The five silver bars weigh on an average 158 grains (about 86 *ratis*) each, with a variation of less than 5 grains either way, except in one case which weighs 6.7 grains more than the average. Two copper bars are of about the same weight corroborating the evidence of Manu that the coins in all the three basic metals weighed a *kārshā*. Some local copper coins have been recovered from the fourth stratum of the Bhīr Mound in Taxila. They can go back to the days of Ajātasatru ; but numismatic experts consider them 'strays' and assign them to a much later period. Although, after the break-up of the Mauryan empire, punch-marked coins ceased to be issued in the North-West, they must have continued to circulate fairly freely up to at least the close of the first century A. D. This is clear from the excavation of forty specimens of these coins at all levels in Sirkap.

---

[1] *Sacred Books of the East,* XIIII, pp. 201-202.

[2] Brown, *The coins of India* (Mysore), pp. 18-19.

Land Transport

Horses, asses, camels and elephants were used for conveyance and oxen for draft. Arjuna, Bhīshma and other great warriors are reported to have driven in chariots with four horses. The single horse chariot, like the modern *ekka*, was in common use. In the *Ādiparvan* we are told that Purochana was sent in a chariot drawn by mules to Vāranavāta. Asses were also possibly used for drawing chariots and carts as done in Sind even to this day. Several carts, each drawn by eight bullocks, are said to have followed Asvatthāmā with the munitions of fighting. The favourite conveyance among the rich was the elephant. Megasthenes says that the government employed some persons to be in charge of road-making. A substantial part of the traffic was by rivers big and small. We have reports about a large variety of boats—from those built of reeds to those constructed of wood. Traffic by sea became well established during this period and sea voyages became a regular feature.

Shipping

By now considerable improvement was made in shipping by Indians who had from time immemorial been active along their coasts and had traded with Malays, East Africa and the Persian Gulf. North-

---

[1] *Taxila* II, p. 752.

West India, with Broach as the chief port, traded with the above-mentioned countries. Indian traders sailed freely in the ships of their own country to Cape Guardafui and then in conjunction with Greeks and Arabs reached the port of Somali. Large timber ships made in India are reported to have sailed to Apologos and Ommana ('Umān). The Arabs were still masters of much of the trade. But, around the coasts of their own country, the Indian kings controlled their shipping. The largest and most extensive Indian shipping was that of the Coromandel coast, controlled chiefly by the Chola kingdom. The Chola ships which visited Malaya resembled the Chinese junks. It was for their use that lighthouses were built on the Chola coast. Farther north, the Āndhras and the Pallavas built two-masted ships, and still farther away the shipping of Bengal seems to have been active and important.[1]

About the year 45 A. D. a Roman captain named Hippalus discovered the existence of the monsoon wind blowing regularly across the Indian Ocean. The Arab sailors, too, were familiar with the phenomenon as the term monsoon from the Arabic word *mawsim* implies. Striking due east from the port of Cana or from cape Guardafui, it was found possible to go straight to Damirke (*Tamilakam*). Pliny writes that if the monsoon was blowing regularly, it took forty days to reach (Muziris, modern Cranganore) from Ocelis, (at the entrance to the Red Sea from the south), the favourite port for travellers to India. According to Pliny the passengers preferred to embark at Bacare (Vaikkarai) in the Pāndya country, rather than at Muziris (Musiri), on account of the pirates who infested the latter port.

Strabo writes that every year, about the time of summer solstice,[2] a fleet of one hundred and twenty vessels sailed from Myos Hormos, a port of Egypt on the Red Sea (in the north). By the periodical assistance of the monsoons, they traversed the ocean in about forty days to reach the ports of Tamilakam (Tamil Nād) or Ceylon. The ships returned with rich cargo which, as soon as it was transported on the backs of camels from the Red See to the Nile and descended the river as far as Alexandria, was poured without delay into the capital of the Roman empire.

Revenue

The main heads of taxation were the king's share of the produce in lieu of rent, a heavy water cess, minor dues and cesses connected with land, income from pastures (*vīvīta*), forests, mines and other works, customs at the frontiers, transport dues at ferries etc, road dues and tolls, the octroi at the city gates, profits of coinage, various profits consequent upon the methods of sale, license fees from workmen, craftsmen, traders and professionals and gambling houses, passport fees, fines derived from the law courts, ownerless property going to the treasury,[1] and special taxes like tithes for religious purposes. In times of straitness 'benevolences' (*pranya* or *prīti*) were exacted, but, in theory, only once, from the well-to-do. A special levy was made on the produce for state granaries to provide for emergencies like war or famine. At the birth of the heir to the king a contribution was taken under the name 'milk-money'. Besides, the *Arthasāstra* mentions : *kara*, a tax on property levied periodically, *rajju*, the cess payable for survey and settlement, and *chora rajju*, police cess .[2]

---

[1] Warmington, pp. 31-32

[2] About the 21st of June.

The kings of this period were identified with the state, and, consequently, there was no difference between the private purse of the monarch and the public purse. In all countries, land was the principal source of revenue, and the same was the case in India. Revenue from land was received from two distinct sources, as income from royal domain and as tax from non-crown lands. The royal domain was usually cultivated by the state and the entire produce went to it ; and "when the royal domain was more than could be cultivated by the state, some part of it was leased out to private cultivators who received one-half of the yield if they employed their own capital, one fourth or one-fifth if the state supplied the capital. In other words, the price paid for their labour, i.e., their wage was one-fourth or one-fifth of the produce. The fourth was probably the common rate paid to such cultivators."[3] It is to this practice that Strabo refers when he writes : "The whole of the land belongs to the crown, and husbandmen till it on condition of receiving as wages one-fourth of the produce."[4]

One-sixth of the land produce was taken as the legal share (*bhāga*) of the king. In addition to this legal levy a very substantial part of the produce was received as water rate which every land had to pay, even though it got its water from natural sources.

---

[1] *Arthasāstra*, 50 ; Manu VII, 30-38 ; Hopkins, pp. 78, 86, 90-91.

[2] Ghoshal : *Hindu Revenue System*, pp. 34, 36, 41-43, 53 ; Dr. Gopal, pp. 41 seqq.

[3] Gopal, M. H., *Mauryan Public Finance* (London, 1935), p. 56.

[4] Strabo, XV, 140.

According to Sukra, the king was to realize one-third, from lands which were irrigated by tanks, canals and wells, one-fourth from those irrigated by rains and one-half from areas watered by rivers. One sixth was to be taken from barren and rocky hills.[1] One sixth was the pure land-tax in the North as well as the South. Kanakasabhai writes that in the Tamil kingdoms "One-sixth of the produce of land was the legitimate share of the King, and for water supplied by the state a water cess was levied from the farmers. The land tax was paid in money or kind at the option of the farmer."[2] Even in the North taxes were generally collected in kind. The grain crops were massed in a public granary or threshing floor for the excision of the king's share prior to their removal to private barns.[3]

A graduated water cess (*udakabhāgam*) was collected. Land irrigated by manual labour (*hastapravartinam*) paid one-fifth of the produce, and that irrigated by water by means of water-lifts worked by bullocks one fourth. Those who irrigated land with the aid of water-lifts worked by some mechanical contrivance or got water from channels had to pay one-third of the produce. If land was irrigated by raising water from rivers, lakes, tanks and wells, one-fourth of the produce was collected as water-cess.

All foreign goods, when they entered a kingdom, paid at the boundary a tax called *vartani*,[4] probably a road toll for the use of the king's highway. Import or export duty (*sulka*) was collected at the *sulkasālā* situated just outside the city. *Sulka* probably also meant an import on local goods. Ships that touched the port also paid the *sulka* of 20 or 16⅔ per cent *ad valorem* according to the custom of the place. Besides, all goods entering the city had to pay the gate dues (*dvāradeya*), which amounted to 20 per cent of the octroi duties. Foreign merchants were treated leniently so that they may get some profit and visit the country more often.[5] Foreign goods likely to compete with indigenous industries were prohibited from being imported.

Octrois, tolls, and customs duties were levied at, arms (10%), fruits, flowers, dried fish, dried meat (16⅔%), precious stones and conch shells

---

[1] *Sukranīti*, IV, ii, 227-9 ; also Vishnu III, 22-3 ; Vasishtha, I, 42 and Buhler's notes thereon ; *Sacred Books of the East*, Vol. XIV, Part 2.

[2] *The Tamils Eighteen Hundred Years Ago*, p. 112.

[3] *Jātika*, I, 339 and 467 ; II, 378.

[4] *Arthasāstra*, Book II, Chapter 21.

[5] Ibid., Book II, Chapter 16.

(duty determined by experts according to the circumstances and nature of the articles), cotton goods, silk, wool, raw materials for textile garments, carpets, curtains, metals, sulphuret of arsenic, dyes, vermilion, spices, wine, ivory, and skins (10%), quadrupeds, bipeds, yarns, cotton, scents, medicine, wood, bamboo, fibres, inferior skins, clay pots, grains, oils, sugar, salt, liquor, cooked rice and the like (5 or 4%). All these commodities had to pay another one-fifth of these taxes as gate due, if they entered the city.[1] Moreover, road and ferry tolls were collected at appropriate places. A harbour toll was levied at port towns. But, when the vessels sought refuge in the harbour with goods spoiled by rough seas, they were either exempted from paying tolls or required to pay half the usual amount.[2] Evasion of the payment of of tolls was heavily fined, and sometimes the commodity was confiscated.[3]

Prostitution was subjected to a tax. Every prostitute, who did not attend the king's court, paid one and a quarter *panas* per mensem to the state. Actors, dancers, musicians, buffoons, mimics and such others who came from foreign countries to give exhibitions had to pay five *panas*. An income tax was levied on native prostitutes, actors, dancers, musicians, jugglers, rope dancers, heralds, pimps and wandering bards.[4] Fishermen paid one-sixth of their haul. Kautilya mentions an income from guilds of artisans and handicraftsmen.[5] Some revenue was realized from liquor in the form of licence fee on special occasions. A duty of 5 per cent was imposed on foreign liquor. Salt revenue was derived in three forms, viz., excise duty, customs duty on imported salt and a consumers' tax (from those who used imported salt).

A large number of miscellaneous taxes were collected. A poll tax on foreigners as well as every member of a citizen's family was levied including children, "the tax increasing with every birth and decreasing with every death."[3] Besides, an excess profit tax was collected from merchants after allowing them a net profit of 5 per cent on country made goods and 10 per cent on foreign goods. A sales tax was levied on the commodities sold. Likewise, when land and buildings were sold by public auctions, the highest bidder had to pay a tax on the purchase value.[1] The rate of this tax is not known. According to Arrian,[2] herdsmen were subjected to a tribute which was paid in cattle, while hunters and shepherds also paid taxes and rendered the state prescribed services. Further, mention is made of a war tax and a house tax. Unearned increment was confiscated, forced benevolences taken and various kinds of income derived from gambling. A tax called *klripta* was collected from villages on sea-shore or on the banks of rivers and lakes ;[3] another levy on villages was called *pindakara.*[4]

---

[1] Gopāl, pp. 85 seqq.

[2] *Arthasāstra,* Book II, Chapter 28.

[3] Ibid., Book II, Chapter 21.

[4] Ibid., Book VIII, Chapter 3.

[5] Ibid., Book II, Chapter 28.

[6] Gopāl, p. 101.

Besides, there was the much disputed *bali*[5] apart from all the taxes enumerated above. Its rate is mentioned variously, and it appears to have been levied on land and collected by special commissioners.[6] Shāma Sāstri holds that it was a religious tax.[7] Bhattaswāmi calls it a local tax of one-tenth or one-twentieth. If these picked and chosen pieces of evidence can be put together, it resembles the *'ushr* which was a *local* religious tax of one-tenth of the produce from lands watered by natural sources and one-twentieth from lands watered by means of buckets, collected by separate tax-collectors, and administered separately for the benefit of the poor of the locality.[8]

Forced Labour

There were two kinds of forced labour or labour tax—*simhanika*[9] and *vishti.*[10] Poor people who could not pay taxes in money or in kind were forced to pay them in the form of service which was used by the state in its manufactories for pounding, frying, extracting oil, and the like.[11] *Vishti* was the gratuitous performance of public services. This does not appear to have been in lieu of any taxes that had to be ordinarily paid, but was in the nature of an additional tax. This tax was very common in ancient India. In the *Mahābhārata* forced labourers are said to have accompanied the army.[12] Manu writes that mechanics, artisans, and others had to work for the king one day every month.[13] Gautama[14] and Vishnu[15] corroborate Manu. Sukra mentions that it was one day in a fortnight.[1] C. V. Vaidya writes that in the Epic period "no caste was exempt from this tax of compulsory labour. Even the Brāhmanas were made to work, if they did not follow their own sacred profession and followed the profession of artisans and labourers."[2] In South India compulsory labour seems to have been employed for the construction of irrigation works, and "even the central government sometimes exploited compulsory labour for its own purposes. The great temple of Tanjore, for instance, was built largely by forced labour."[3] *Vishti* appears to have been chiefly employed in the construction of public works as was the case in South India.

---

[1] *Arthasāstra*, Book III, Chapter 9.

[2] *Indica*, Chapter XI, Gopal, p. 111.

[3] *Arthasāstra*, Book II, Chapter 28.

[4] Ibid., Chapter, 15.

[5] Ibid., Chapters 6 and 15.

[6] Ibid., Chapter 35.

[7] Ibid., Chapter 14.

[8] Dr. S. A. Q. Husaini, *Arab Administration*, pp. 22, 37 and 95.

[9] *Arthasāstra*, Book II, Chapter 15 ; See Bhattaswāmi's explanation, *Journal of the B. O. R. I.*, Vol. XI, part iii, p. 85.

[10] *Arthasāstra*, Book I, Chapter 4.

[11] Ibid., Book II, Chapter 15.

[12] *Mahābhārata*, LIX, 41-3.

[13] Manu, VII, 138.

[14] Gautama, X, 31.

[15] Vishnu III, 32.

Two kinds of forests yielded income to the state, each under a superintendent and his staff. One was the elephant forest which yielded that essential animal for war and elephant products such as ivory, bone, etc., and the other was the forest which supplied timber and a host of other useful things. As we have already noticed under forestry, manufactories were set up in forests which made articles out of the forest produce. Fines were imposed for breaking forest regulations which constituted an additional source of forest revenue.

"Mines are the source of treasury", writes Kautilya.[4] Mines yielded minerals like gold, silver, copper, tin and lead as well as diamonds and precious stones ; and seas and oceans produced conch shells, pearls, corals, salt and also precious stones. Certain mines were owned by the state and the revenue therefrom was known as *mula* (entire value). From private mines the king got a *bhāga* (share). From certain categories of mines the state received a premium of 5 per cent. *Sulka* and a compensatory levy were collected from private individuals who worked mines.[5] The state augmented its revenue from mines by manufacturing commodities of copper, lead, tin, mercury, brass, bronze, etc.

The state maintained a weaving department, where all kinds of cloth and even mail armour were produced.[6] It manufactured sugar, rice, flour, beverages and a host of other articles and sold them for profit.[7]

A fee was collected for testing and a mintage for minting coins. Obviously, as under the later rulers of India, coinage was free and a seignorage was charged for minting bullion into gold. Much more income must have been received from minting token coins.[8]

---

[1] *Sukraniti*, IV, 2, 241.

[2] *Epic India*, p. 215.

[3] R. K. Mookerjea, *Local Government in Ancient India*, pp. 146-7.

[4] *Arthasāstra*, Book II, Chapter 12.

[5] Gopal, p. 123.

[6] *Arthasāstra*, Book II, Chapter 23.

[7] Ibid., Chapter 15.

[8] Gopal, p. 125.

Besides, according to the *Arthasāstra*, the state owned a large number of boats and ships and hired them out to passengers and merchants. Strabo writes, "The admiral of the fleet lets out ships on hire both to those who undertake voyages and to the merchants."[1] Boats were let out for fishing conch shells and pearls as well as for catching fish.

The income from the royal domain must have been immense. The state had an agricultural department which in addition to looking after agriculture in general, employed a band of trained artisans, labourers, slaves and prisoners to cultivate crown lands (*sītā).* The royal domain was so vast that lands were often leased out to private cultivators.

Treasure-trove was regarded as the property of the king. A small part of it was given to the finder. Moreover, there were several occasions when the king was given presents. On the birth of a prince the king received presents in addition to the tax levied on the occasion.[2] The state inherited heirless and unclaimed property. Interest on loans, especially of grain, was another source of income. As we have already seen, the rate of interest on grains was incredibly high. The king had his own private herds which were a source of revenue. There was a passport fee of one *māsha*, and a large number of fines were imposed for various reasons. In times of financial difficulties the state made additional demands on the cultivators which was sometimes as high as one-third. From merchants and professionals the demand ranged from 50 *panas* to 500 *panas* ; sometimes it amounted to confiscation of the entire wealth. In addition to these demands, voluntary surrender of wealth to the state was manipulated by offering rewards.

Kautilya suggest several other ways of raising revenue which cannot be considered moral even by the capitalists—"cheating people with the aid of spies ; misappropriating the property of heretics, temples and dead men, of religious institutions under the pretence of guarding the property ; exploiting the superstition, credulity, and fear of the people ; cheating merchants in the capacity of partners or debtors ; confiscating the property of people with the help of prostitutes and various other false pretences." Some of the methods mentioned above are advocated by Sukra also.[3]

In Tamil Nād "customs, tolls, and land-tax formed the chief sources of revenue. Customs were levied at all the sea-ports. There the goods landed were impressed with a seal bearing the royal emblem and were removed to the merchants' ware-houses after payment of duty.[1] Tolls were collected on the trunk-roads used by caravans and at the frontier of each kingdom.[2] The tribute paid by vassal chiefs and princes, the booty gained in border expeditions, and the profits of royal demesnes, such as the pearl fishery and elephant forests, also formed a considerable portion of the king's income.[3] The merchants paid in kind and the rancher did the same. Customs duties paid by 'merchants coming from far' could have also been in kind.[4] Trade was taxed all along the route. Commodities were held up at every state for the payment of several kinds of taxes. In return for these payments the traders were protected by the states.

---

[1] Strabo, XV, 46.

[2] Gopal, p. 130.

[3] *Sukraniti*, IV, 2.

On the whole, the taxes af this period were heavy, crushing, merciless and unscruplous. That in addition to all imaginable taxes, the state should stoop to employ prostitutes, spies and cheats to swindle its citizens for its own benefit is really horrible to the subjects and disgraceful on the part of the rulers. But this was the universal phenomenon at this stage of economic development all over the world. It was a part of the ancient capitalistic game everywhere.

Exemption From Taxation

We shall see in the next chapter that extensive tax-free pieces of land were granted to the Brāhmanas, royal princes, officers of the state and religious institutions, and for charitable purposes. "When irrigation works like tanks and lakes were newly constructed by private persons, taxes on their lands below such works were remitted for five years. When ruined or neglected water-works were repaired, the remittance of taxes was for four years. For improving, extending, and restoring water-works overgrown with weeds, taxes were remitted for two years. If new works were acquired by mortgage or purchase, lands below such works got a remission of taxes for two years. Taxes were remitted for a like period when uncultivated lands were acquired for purposes of cultivation."[5] Labourers, because of their poverty, were exempted from paying the consumers' tax on salt used for purposes of food.[6]

Expenditure

Under expenditure came the maintenance of the sovereign and his court, the salaries of the ministers and the vast army of minor officials and spies, religious provisions, the demands of the army and its equipments including forts, the expenses connected with mines, forests, and the like and public works such as roads, irrigation, etc. which were regarded as the functions of the state, the maintenance of the family of the slain soldiers, officials dying during employment, and finally of helpless persons.[1]

---

[1] *Pattinap-pālai, ll.* 125-135.

[2] *Perum-pan arrup-padai*, I, 81.

[3] *The Tamils Eighteen Hundred Years Ago*, p. 112.

[4] *Mahābhārata*, 11, 5, 114.

[5] Gopal, pp. 148-49.

[6] *Arthaśāstra*, Book II, Chapter 12.

The main item of expenditure was the salaries paid to civil and military officials of the state, councillors in the court, heads of a large number of departments (as many as eighteen listed by Kautilya)[2] and the numerous employees in the various branches of government. Further, there was the expenditure on the political side, which included emoluments to envoys, *charge d' affairs*, messengers, agents, prostitutes used for political purposes, an intensively organised system of espionage and institutes for training spies. Another chief item of expenditure was on the royal household comprising the *harem*, kitchen, king's relatives and palace establishment. The *harem* consisted of the many wives of the king, prostitutes, eunuchs and female guards and servants. The royal household consisted of members of the royal family, priests, teachers, the door-keeper, the superintendent, the chamberlain, nurses, astrologers, soothsayers and the like, bards, musicians, heralds artisans, bodyguards, king's friends and companions, learned men, the king's charioteer, grooms, and a host of other servants and workers. There might have been some judges with assignmnets and a very large police force open and secret.

Ecclesiastical expenditure was largely in the nature of grants of lands, presents and sometimes salaries. When Asoka made up his mind to propagate the *dharma*, he employed missionaries and special officers and despatched preachers to far-off foreign lands, which must have meant expense to the state. The numerous and stately pillars and monasteries which Asoka erected at many places must have cost a lot. Again, there was the expenditure on royal tours which under Asoka were converted into religious tours. Large sums were given in charity. There were the expenses of public feasts, *(samājas)* and the feeding of the poor in honour of gods and ancestors.

Some amount appears to have been spent in medicine and poor relief. Megasthenes observes, "should any of them (foreigners) lose his health, they send physicians to attend to him, and take care of him otherwise."[3] We do not have any information concerning public hospitals, but there must have been some arrangements for the treatment of soldiers. Kautilya mentions surgeons in charge of horses,[1] elephants and other animals. Asoka's Rock Edict II mentions provisions for the treatment of men and animals.

---

[1] Gopal, pp. 143-44.

[2] *Arthasāstra*, Book I, Chapter 12

[3] Diodorus II, 42 ; Strabo, XV, 1, 50,

Money from the royal treasury was spent in the construction of irrigation works. The king had to construct reservoirs filled with water, either perennial or drawn from some other source.[2] Tho Girnār inscription[3] of Saka Mahākshatrapa Rudradāman records that the lake Sudarsana was constructsd by Pushyagupta, the provincial governor of Chandragupta Maurya, with well-provided conduits, drains, and means to guard against foul matter, and was further improved by Tushāspha, a governor under Asoka, in a manner worthy of a king. Rudradāman adds that it cost him a vast amount of money to repair a breach "420 cubits long, just as many broad (and) 74 cubits deep."

Even as early as the *Mahābhārata*, the king is enjoined to multiply the number of tanks and wells, while Sukra[4] directs that there should be many canals, wells, tanks and ponds in the kingdom. The inscriptions of the period also refer to the works undertaken by the state. King Khāravela of Kalinga is said to have strengthened the embankments of springs and lakes.[5] Visvavarman of Mālwa[6] built irrigation works and tanks. The like was the case in South India.[7] Moreover, all the public undertakings dealt with above as sources of revenue, had an expenditure side as well.

The states were mostly military-cum-police in character. Hence the biggest item of expenditure or appropriation was by the army and its chiefs, Many of the states had navies. Megasthenes mentions that the Mauryas had one. Other states in the coastal regions should certainly have had fleets, big or small, for trade, war or police purposes.

The army consisted of the commissariat and the combatants. Concerning the commissariat, Strabo writes, "One division of magistrates in Pātaliputra was appointed to co-operate with the admiral of the fleet, another with the superintendent of the bullock trains which are used for transporting engines of war, food for soldiers, provendor for the cattle and other military requisites. They supply servants who beat the drums and others who carry gongs ; grooms also for the horses and mechanists and their assistants."[1] Camels, horses, mules and asses were also used for pack transport and hauling carts.[2]

---

[1] *Arthasāstra*, Book II, Chapter 1.

[2] Ibid., Book II, Chapter 1.

[3] *Epigrphia Indica*, VII, No. 6.

[4] *Sukraniti* ; IV, 4, 125-9.

[5] V. A. Smith, *Early History of India*, p. 219 and footnote.

[6] *Gupta Inscription*, No. 17.

[7] *Epigraphia Indica*, Vol. V, No. 17.

Megasthenes enumerates four arms of the army—infantry, cavalry, chariot arm and elephant force. The commander-in-chief was paid 48,000 *panas* and the commander 24,000 *panas*. The chief of each of the four arms was paid 8,000 and the superintendent thereof 4,000. The chariot driver, the physician of the army, the trainer of the horses, the carpenters and those who reared animals each got 2,000. A trained soldier was paid 500 and the same was the salary of an accountant or writer. The elephant driver received 500 to 1000 *panas*. Fixing the infantry at 600,000, the cavalry at 30,000, the elephant force at 9,000 and the chariot arm at 8,000, Dr. Gopāl has computed that the cost of the army should have been about 17,000,000 *suvarnas* or £ 17,000,000 a year,[3] a stupendous amount, taking into consideration the purchase value of the *suvarna* in those days.

Conclusion

On the whole, we have enough evidence to establish that by about the beginning of tho 3rd century A. D. India, as we have known it in recent times, had developed an economic production-relation based on stabilized private property as well as a social, political, moral, religious and philosophical superstruture suited to it.

However, the picture all over the country was not uniform. Certain parts of the sub-continent were more advanced, certain other parts less developed. There were very many backward areas, islands in the midst of civilized regions. There were forests, hills, marshes and other inaccessible patches, big and small, where the light of higher civilization could not reach. Neither was the progress in the developed areas marked by a uniform speed, nor was it on a consistently forward course. The progress was awkward, rugged, uneven, wave-like, and zig-zag. But, in the midst of diversity and lack of equal progress, one fact becomes clear, that private property with the corresponding institutions had emerged and stabilized itself throughout the sub-continent by the year 200 A. D.

---

[1] Strabo, XV, 1, 50.

[2] *Arthasāstra*, X, Chapters 2 and 4.

[3] Dr. Gopal, p. 196.

CHAPTER VI

THE GROWTH OF FEUDAL ELEMENTS
(C. 500 B.C.—500 A.D.)

We have discussed the primitive capitalists economy under different heads, viz., origins, set-back to, emergence and consolidation of private property. The entire period of primitive capitalist economy coincides with the period of slavery. It will be unreal to imagine that a subsequent stage began where the previous one ended. The various stages were inter-locked. This chapter deals with the development of feudal elements, which process appears to have germinated even with the emergence of private property, developing its rudimentary institutions through the period of consolidation. The elements of feudalism and, in certain areas, an ill formed feudal society, emerge in the period covered by this chapter. By the end of the 5th century A. D. all the principal elements of feudalism become clearly established and in the next stage the process of feudal formation gets accomplished. Along with the development of feudal elements many of the economic characteristics of the feudal society also spring up.

The following are some of the essential economic features of feudalism, a new type of production-relation on land in which land was owned by the superior classes, standing in a favourable relation to royal power,[1] and exploiting the tillers of the soil with oppression and tyranny :—

1. Theoretical ownership of the entire land by the king.
2. Direct ownership of an immense area of land by the monarch.
3. Tax-free enjoyment of the bulk of the land or the levies therefrom by the superior classes—the princes, priests, warriors and officials.
4. Subinfeudation or tho grant of smaller areas by the original grantees to others.
5. Economic immunities granted to the superior classes.
6. Commendation, i.e., making over of, or voluntary surrender by the weak of their lands to the strong in lieu of protection.

---

[1] See the article, *K Voprosu O Razvitii Feodalizma V Indii* by K. A. Antonova in the AK-Nauk USSR Kratkie scobschenia instituta vostokovedeniya, III, Moskva, 1952, pp. 23-32, extracted in English in the *Annals of the Bhandarkar Oriental Research Institute*, Vol. XXXVI, 1955 (Poona, 1956), p. 265.

7. Oppressive taxes collected without ruth or remorse.

8. Forced labour without any wage for a certain period on the lord's field or factory or forced labour for public purposes.

King Owner of All Lands

A Hindustānī proverb says, "He who has the stick, his is the buffalo". In India, as in many other countries, lands belonged to the ruler who possessed the ultimate power of coersion. If others possessed lands, it was by sufferance. Some of the theorists have declared in unambiguous terms that lands were held of the king for proper cultivation and regular payment of the king's due. In default of the fulfilment of any of these two conditions, the king could replace the owner in his holding. The *Arthasāstra* states, "Lands may be confiscated from those who do not cultivate them, and given to others ; or they may be cultivated by village labourers *(grāmabhritaka)* and traders *(vaidehaka)*, lest those who do not properly cultivate them might pay less (to the government)".[1] Another passage of Kautilya says, "The king shall exercise his right of ownership *(svāmyam)* with regard to fishing, ferrying and trading in vegetables *(haritapanya)* produced in the beds of reservoirs or lakes *(setushu)*."[2]

Megasthenes writes : "They (the husbandmen) pay a land tribute to the king, because all India is the property of the crown, and no private person is permitted to own land. Besides the land tribute, they pay into the royal treasury a fourth part of the produce of the soil."[3] According to Vishnu, everything dug out from mines belonged to the king.[4] Brihaspati and Nārada hold that if a Kshatriya, Vaisya or Sūdra died without male issue, or wife, or brother, his property should be taken in escheat by the king, for he is the lord of all.[5] As we have already noticed in Chapter IV,[6] according to *Āpastamba*, a daughter inherits only in default of a son, teacher or pupil. The king inherits in default of any of the categories mentioned above.

A text quoted by Bhattaswāmi (apparently from a *Smriti* work) says, "By those versed in the sacred books the king is declared to be the lord *(pati)* of land as well as water : with regard to other things the householders *(kutumbin)* have the right of ownership *(svāmyam)*[7]. In the view of Kātyāyana, the king has always been declared to be the owner (*svāmin*) of the soil and not of other things.[1]

---

[1] *Arthasāstra*, Book II, Chapter I.

[2] Ibid.

[3] McCrindle, *Megasthenes and Arrian*, pp, 41-42.

[4] Vishnu, III, 55,

[5] Brihaspati, XXVI, 119 ; Nārada, XIII, 51.

[6] See supra, p, 74.

[7] Ghoshal (U. N.), *The Agrarian System in Ancient India*, p. 97.

The ultimate ownership of land by the king did not preclude alienation by the occupier, the royal right persisting through each change.[2] The verdict of the great constitutionalist, Maitland, was as true in the case of India as it was with reference to England when he said, "All land is held of the King. The person who has the right to live on the land and to cultivate it, is a tenant."[3]

"All land was held of the king." The so-called private owner of a piece of land was a lessee who enjoyed the land in perpetual lease with a right to transfer the lessee's rights to others or to pass them on to his heirs. As long as the lessor (the king) got his lease-money (revenue) regularly, he did not interfere with the enjoyment of the leased out land by the lessee or his heirs or assigns. The moment the payment of his lease-money was stopped, or unduly delayed or there was fear that owing to negligence on the part of the occupier to cultivate the land properly, his (the king's) share was likely to dwindle, he stepped forward, cancelled the original lease and gave the land to a new lessee.

"The historical records of Northern India, fragmentary and imperfect as they are, illustrate from time to time the king's prerogatives with reference to the land, which, so far as they go, agree with the evidence of the *Smritis* and the *Arthasāstra*. Reference to the royal farms or allotments in the villages which were often let out to tenants are to be found, as we have seen, in the extant records of the Mauryas, the Guptas, the Pālas, the Paramāras, and other dynasties of Northern India."[4]

The ultimate owner of the land, when he made grants to the Brāhmanas or for charitable purposes or when he assigned areas, big or small, to his civil officers, or gifted villages for the maintenance of the members of the royal family, or bestowed fiefs on his military officers on condition of supplying troops, granted or assigned the revenue, the grantees or assignees stepped into the shoes of the original owner. In spite of the perpetual lease to the immediate owner of land, and notwithstanding the grants and assignments, the right of the ultimate owner persisted.

---

[1] Ghoshal, pp. 97-98.

[2] W. Fay, *Die Konighliche Gewalt*, pp. 58-59.

[3] F. W. Maitland, *The Constitutional History of England* (Cambridge, 1955), p. 24.

[4] Ghoshal (U. N.), *The Agrarian System in Ancient India* (Calcutta, 1930), pp. 95-96.

Of course, there are some ancient commentaries which deny the king's ownership of land, but as the institution of kingship evolved and developed, the writings inclined more and more towards the king's *svāmyam* (ownership). Above all, the final argument on this question rested with the king, viz., *argumentum baculinum*, the argument of the stick.

The Royal Demesne

As in all feudal societies, the Indian kings of our period possessed vast estates. An item of revenue is included in the *Arthaśāstra* which is called *sīta* and which may be roughly translated as "produce of the royl farms."[1] The king's estate or demesne was cultivated under the supervision of the Royal Steward. Concerning the functions of this officer,[2] it is stated that he should collect seeds of different kinds, have the king's land ploughed several times and cause them to be sown by slaves, free labourers and convicts. He is to provide them with agricultural implements and appliances needed for cultivation. Land that could not be cultivated under the direct supervision of the Royal Steward is to be given to those who cultivate fields in return for half the harvest[3] or to those who live by their own labour (and cannot meet any expenses) and receive one-fourth or one-fifth of the harvest. Megasthenes testifies to the tilling of lands by the cultivators of the Mauryan empire on condition of their receiving one-fourth of the produce. Under normal conditions, the cultivators should pay the contracted share of the king, if they failed to cultivate the land taken up by them.

Besides the royal demesne consisting of cultivated lands, an extensive forest "provided with only one entrance, rendered inaccessible by the construction of ditches all round, with plantations of delicious fruit trees, bushes, bowers, and thornless trees, with an expansive lake of water, full of harmless animals as well as beasts of prey (*mārgāyuka*), including tigers (*vyāla*), male and female elephants, young elephants and bisons—dangerous animals deprived of their claws and teeth—shall be formed for the king's sports."[4]

Feudal Grants

It is possible to make out the following categories of grants : (1) grants to the Brāhmans with the right of alienation, (2) to the crown officers to meet the expenses of public charities, (3) to members of the royal family, (4) to officials in usufruct in payment of services and (5) as military fiefs on the condition of supplying troops.

---

[1] Ghoshal (U. N) ; *The Agrarian System in Ancient India*, p. 11.

[2] *Arthaśāstra*, II, 24.

[3] Obviously, these would have to incur certain expenses in connection with the cultivation,

[4] *Arthaśāstra*, Book II, Chapter 2.

Grant to the Brahmanas

As in the case of pre-feudal Europe, most of the grants during the Epic period were in favour of the priestly class. Yājnavalkya lays down in this connection what may be called the official procedure relating to the issue of royal orders for the donation of lands to the Brāhmanas.[1] Such grants, evidently were not only revenue-free and perpetual, but also carried with them the right of alienation. In the chapters relating to the settlement of the new and old tracts[2] the *Arthasāstra* enjoins the king to grant lands exempted from taxes and fines (*adandkarāni*) to the following classes of persons : the sacrificing priest (*ritvik*) the preceptor, the domestic chaplain (*purohita*) and those learned in the Vedas. Kautilya, even while inculcating the methods of raising revenue during emergencies, expressly enjoins the immunity of the Brāhmanas learned in the Vedas (*srotriya*).[3]

Religious grants were sometimes made for certain specific purposes and sometimes simply to increase the religious merit of the donors.[4] Lands were also donated by kings to increase their religious merit, strength, victory and dominion, as we see in the Chammak copper plate[5] and the Siwani copper plate[6] of Mahārāja Pravarasena II. Grants were given to defray the expenses of worshipping gods and goddesses,[7] for the maintenance of the *bali* (of flowers, sandal paste, etc.), *chāru* (rice or other corns boiled with milk and mixed with clarified butter), *sattra* (alms-house), perfumes, incense, garlands and lamps, and for the repair of temples.[8]

We come across a large number of cases in the pre-Gupta and the Gupta period in which villages were donated for religious and charitable purposes. We learn from the *Ambattha* and *Lohichcha suttas* that Pasenadi was a patron of the Brāhmanas and gave them estates on royal domains with power over them as if they were kings.[9] The Pali cannonical work *Dīgha Niyāka*, which represents Buddhist traditions and which was written after the Buddha, reports at the beginning of the third *sutta* that the Brāhmana Pauskarasadi was endowed with the village of Ukkatta by Pasenadi, king of Kosala. Similary, at the beginning of the fifth *sutta* we read that the Brāhmana Kūtadanta was endowed by king Bimbisāra of Magadha with the village of Khānumāta. The twelfth *sutta* begins with the mention of Salavatika, a village that had been given by the Kosalan king to a Brāhmana, Lohichcha. The tradition of such royal gifts of villages goes back to the middle of the first millennium before Christ.

---

[1] Yājnavalkya, *Smriti*, I, 378.

[2] *Arthasāstra*, Book II, Chapter 2.

[3] Ibid.

[4] J. F. Fleet, *Corpus Inscriptionum Indicarum*, Vol. III, pp. 93, 100, 107, 117, 254.

[5] Ibid. pp 241-42.

[6] *Epigraphia Indica*, Vol III, p. 243.

[7] *Ibid.*, p. 135.

[8] J. F. Fleet, Vol. III, pp. 112, 121, 125, 129, 164.

[9] *Dialogues of the Buddha*, I, pp. 108, 288.

During the Gupta period we may mention the Nālanda plate of Samudragupta,[1] the Bhitari stone pillar inscription of Skandagupta,[2] the Khoh copper plate inscription of Sarvanātha,[3] the Ārang copper plate of Mahā-Jayarāja,[4] the Rāypur copper plate of Mahā-Sudevarāja,[5] the Siwani copper plate of Pravarasena II,[6] the Majhgawām copper plate of Hastin,[7] the Kārtalāi copper plate of Jayanātha,[8] the Khoh copper plate of Jayanātha,[9] and the Khoh copper plate of Sarvanātha.[10] In most of these cases the Brāhmana donees enjoyed all items of royal dues which are specifically recorded in the inscriptions. The donees could punish or evict tenants who refused to pay their dues.

Theoretically, the donees were forbidden to exact any new taxes from the people residing in the area donated to them under the penalty of annulment of the donation.[11] The donee, who had nothing to pay to the government, was prohibited to encourage revenue-paying cultivators or artisans from other villages to come and settle in the donated villages ;[12] for this would result in the loss of revenue to the king. To purchase and donate a pieces of land, private individuals had to obtain the previous permission of the government through the local authorities.[13] When Vātabhoga purchased an area of cultivated land for the purpose of endowment, he is reported to have taken permission from the district governor.[14] The sanction of the state was necessary in these cases because it was only that supreme authority which could exempt a given area of land from the payment of all kinds of royal dues. By the Farīdpur (Bengal) plates of the early 6th century, plots were given to the Brāhmana on payment, by some rich merchants, of the commutation fee for taxes. This practice is proved by the Dāmodarpur plates[1] where the freedom from taxes in perpetuity is purchased. The deposit of payment for the first five of these plates was made in accordance with the law of *nīvīdharma*, the equivalent of a modern trust-fund[2].

---

[1] Fleet, III, p. 52. [2] Ibid., p. 93. [3] Ibid., p. 135

[4] Ibid., 191 [5] Ibid., 196 [6] Ibid., 243

[7] Ibid., 106 [8] Ibid., 117 [9] Ibid., 121

[10] Ibid., 125 [11] Ibid., pp. 117, 121, 125

[12] Ibid., p. 254

[13] *Indian Antiquary*, 1910, p. 199 (plate B) and p. 203 (plate C).

[14] Ibid., p. 195 (plate A).

In most of the inscriptions it is specifically stated that the king has no right to confiscate the land once granted by him or his predecessors. But in some cases the king reserves the right of resumption under certain circumstances. There are a few inscriptions like the one in Nāsik in which the king retained the right of abrogation. Exemptions from various dues and special immunities given to the donees are recorded in the grants.

In most of the Gupta inscriptions the same terms of grant are repeated again and again. Hence, in a work of this nature it is enough to cite only one example, namely, the Chammak copper plate of Mahārāja Pravarasena II, which donates a villages named Chārmanka, on the bank of the Madhunadi, measuring eight thousand (8,000) *bhūmis* to one thousand Brāhmanas.[3] The portion relevant to our purpose reads : "Be it known to you that in order to increase our religion and life and strength and victory and dominion, (and) for the sake of (our) welfare in this world and in the next, (and generally) for our benefit, this (village) is granted in (our) victorious office of justice as a grant not previously made.

"It is not to pay taxes ; it is not to be entered by the regular troops or by the umbrella-bearers ; it does not carry with it (the right to) cows and bulls in succession of production, or to the abundance of flowers and milk, or to the pasturage, hides, charcoal, or to the mines for the purchase of salt in a moist state ; it is entirely free from (all obligations of) forced labour ; it carried with it hidden treasures and deposits and *klipta* and *upaklipta*, it is (to be enjoyed) for the same time with the moon and the sun ; (and) it is to follow (the succession of) sons and sons' sons. No hindrances should be caused by any one to those who enjoyed it. It should be protected and increased by all (possible) means. And whosoever, disregarding this charter, shall give or cause to be given, even slight vexation, we will inflict on him punishment, together with a fine, when he is denounced by the Brāhmans.

---

[1] *Epigraphia Indica*, XV, pp. 113-145.

[2] *Annals of the Bhandarkar Oriental Research Institute*; Vol. XXXVI, 1955 (Poona, 1956), p. 265.

[3] Fleet, Vol., III, pp. 241 seqq.

"And this condition of the charter should be maintained by the Brāhmans, and by (future lords), namely, (the enjoyment of this grant is to belong to the Brāhmans) for the same time with the moon and the sun, provided that they commit no treason against the kingdom, consisting of seven constituent parts, of (successive) kings ; that they are not slayers of Brāhmans and are not thieves, adulterers, poisoners of kings, etc ; that they do not wage war ; (and) that they do no wrong to other villagers. But, if they act otherwise, or assent (to such acts), the king will commit no theft by taking the land away."[1]

The taxes and other dues from which the donee was to be exempted, those reserved by the king, and those transferred by him, were all recorded in detail. Again, the villagers were asked to pay the customary tributes and royalties to the donee, and to render him all obedience. The Khoh copper plate of Sarvanātha, addressing the villagers, commands thus : "You yourself shall render to these persons the offerings of the tribute of the customary royalties, taxes, gold, etc., and shall be obedient to their command...And those kings who shall be born in our lineage, by them this grant should not be confiscated (but) assented to."[2]

The donations were made by the king, other members of the royal family, the officials of the state, guilds or private individuals for religious merit. In Europe people of these categories surrendered their estates to the Church, but in India to religious institutions[3] and to the individual members of the priestly class. The cruelties and oppressions of the ruling class created a fear psychosis and people, imagining that the next world would be equally horrible, parted with large estates to save their souls from the agonies of the next world or a series of future births.

From a survey of the available inscriptions we learn that a substantial portion of the cultivable land was given away to the religious upper class. During the period under review the majority of the grantees were from the religious order just as the Church was the chief grantee in Europe during the corresponding period. The grants are mostly in Sanskrit even when the language of the region and of the ruler could not have been that tongue. This fact clearly establishes the supremacy of the Brāhmanas in the early centuries of the Christian era. "We read of estates of 1,000 *karisas* and more, farmed by Brāhmanas, and one large enough to require for its cultivation as many as 500 ploughs and a host of hired labourers to ply these ploughs with their oxen."[1]

---

[1] Fleet, Vol. III, pp. 241-242.

[2] Ibid., p. 132.

[3] *Epigraphia Indica*, V, 142-50.

Huan Tsang informs us that the Nālanda Vihāra was maintained out of the revenues of about a hundred villages granted to that institution.[2] When I-tsing visited India, this number of endowed villages reached two hundred.

The surviving donative inscriptions can only be a tiny fraction of the total which existed in those days. Thus a great portion of the land should have got accumulated in the hands of the preistly upper class, standing in a special relation to the king, fulfilling one of the essential conditions of feudalism. Religion was one of the arms of the coersive force of the king, and obviously, in that age, the major arm. Hence, it was quite in the fitness of things that the king should keep the religious leaders completely satisfied and vested with economic power so that they might assist the ruler in exploiting with oppression the peasants, workers and others.

Charitable Grants

We have evidence of lands granted to some crown officials to meet the expenses of public charities.[3] Later inscriptions making such grants have come down to us, and we can safely rely on the evidence of Kautilya when he mentions "in one place the *brāhmadeya* lands side by side with the *atithya*, which the commentator explains as 'lands granted to judicial officers for the purpose of alms-giving and such other pious acts."[4] These lands were not granted to the officials but placed under their control and supervision. During the Gupta period grants were sometimes made for feeding the mendicants and lighting lamps as we notice in the Sānchī Stone Inscription of Chandragupta II dated (412-13 A.D.). This Buddhist grant is of a village called Isvaravāsaka to the Ārya-Samgha community of the faithful by an officer of Chandragupta II.[5]

Grants to Royal Princes

Members of the royal family were granted substantials estates of a feudal character. If the members of his own family could not be well provided for, there was no meaning or substance in the king grabbing an enormous portion of the wealth of the kingdom. We have the record of one clear case in which a king assigned a village to one of the royal princesses. It led to a dispute between Ajātasatru and the ruler of Kosala, Pasenadi, whose sister, Kosala Dēvi, was the wife of Bimbisāra, king of Magadha. When Ajātasatru, Bimbisāra's son by another wife (the Videha lady from Mithilā), put his father Bimbisāra to death, Kosala Dēvi died of grief. Pasenadi then confiscated a township in Kāsi, the revenues of which had been granted to Kosala Dēvi as pin money. After a war, there was peace. Pasenadi gave his daughter Vajira in marriage to Ajātasatru and conferred upon her, as a wedding gift, the very village in Kāsi, which had been the subject of dispute.[1] Such grants there should have been many. The taxes of one or more villages rural or suburban were sometimes made over by the monarch (or his chief queen)[2] to a daughter on her marriage.[3]

---

[1] *History and Culture of the Indian People*, Vol., II, p. 595.

[2] S. Beal. *The Life of Hiuen-Tsiang* (London, 1888), p. 112

[3] *Epigraphia Indica*, V, 142-50 Income from an entire township is assigned to a great temple and a General named Jaya is appointed to administer the grant.

[4] Ghoshal (U. N.), *Contribution to the History of the Hindu Revenue System* (Calcutta, 1929), p. 43.

[5] Fleet, Vol. III, pp. 29 seq.

When Karikāla the Great (50-95 A. D.) defeated the Aruvālar and annexed their territory to his kingdom, he distributed the conquered lands amongst Vellāla chiefs[4] who were his relatives. The descendants of some of these chiefs are to this day in possession of their lands, which they hold as petty Zamīndārs.[5] They are now known as *Mudalis* or the First in Caste."[6] Besides, there are a large number of cases in which the Maurya, Sātavāhana and Gupta rulers as well as smaller kings granted large provinces to the princes of royal blood, in many cases, with the right of issuing coins in their own names.

Grants to Officers

The fourth class of land-grants, free of taxes, of which we have evidence, is the assignment of lands to officers in lieu of their salaries. The earliest text which mentions such assignments is the Manu *Smriti* and it is supported by Rudradāman's Girnār inscription dated about 150 A. D. The existence of such assignments is borne out by Kautilya who writes: "Superintendents, accountants, *gopas*, *sthānikas*, veterinary surgeons *(anīkastha)*, physicians, horse-trainers and messengers shall also be endowed with lands which they shall have no right to alienate by sale or mortgage."[1] The term 'superintendents' signifies a large number of civil officers like those supervising storehouses, commerce, passports, weights and measures, tolls, weaving, agriculture, cattle-rearing, slaughter-houses, manufacture of liquor, prostitutes, etc. *Gopas* and *sthānikas* were ward officers under a town officer having civic as well as police duties. Further, a subsequent passage of the *Arthasāstra* mentions several kinds of spies who were assigned lands as remuneration for their spying activities.[2] Thus, the passages of the *Arthasāstra* clearly state that assignments were made to both civil and military officers which they could not alienate. They were held and enjoyed in lieu of emoluments for their services.

---

[1] Rhys Davids, *Buddhist India* (New York, 1911), pp. 3-4.

[2] Jātaka, V, 4.

[3] Ibid., II, 237 and 403.

[4] *Ain kuru-nūru* ss. 1-10.

[5] The Zamindārs of Cheyār, Chunāmpat, etc. in the Chingleput district.

[6] *Tamils Eighteen Hundred Years Ago*, p. 114.

These civil and military officers kept down the people, carried out a naked exploitation in the name of the king and oppressed and squeezed the masses, like so many crushers of sesame, to force them to surrender the fruit of their labour.

Military Fiefs

The last class of grants consisted of military fiefs given on the condition of supplying troops. The twenty-third *sutta* of *Dīgha Niyakā* mentions a prince or subordinate ruler Pàyāsi, described as a *rajanna* as being the lord of the town of Setavya, by gift of Pasenadi. In the chapter of the *Arthasāstra* relating to the duties of the Revenue Collector, he is required to prepare a statement showing "villages that are exempted from taxation (*parihāraka*), those that supply soldiers (*āyudhīya*)."[3] From the above passages it is clear that military assignment in lieu of providing troops were granted to military chiefs and such assignments were revenue-free. Moreover, in Kautilya's passages referred to above a large number of military officers have been included as those who should be assigned lands.

This feature, that is, the existence of land tenure based on military service, which is considered by orthodox writers, as the most essential element of feudalism, is thus proved by two passages of the *Arthasāstra.*[4] Moreover, we have additional evidence to establish that fiefs big and small were given to military leaders on the condition of supplying troops. Huan Tsang, the illustrious Chinese pilgrim, who visited India between 629 and 645 A. D., gives some valuable information on this point. He says that one of the four parts (one-fourth) of the lands was given as endowments to great public servants, and that the ministers of the state and common officials all had their portion of land, and that the ministers of state were maintained by the cities assigned to them.[1]

---

[1] *Arthasāstra*, Book I, Chapter 2. [2] Ibid.

[3] Ibid., Book II, Chapter 30 (opening section).

[4] Ibid., Book I, Chapter 2 and Book II, Chapter 30.

We have a passage which is common to the *Mahābhārata*[2] and the *Manu Dharma Sāstra*[3] and is reproduced by *Brihaspati*[4]. It mentions the scale of remuneration or the sizes of the fiefs of some of the king's officers. The lord of ten villages, got one *kula* of land, i. e., as much land as could be cultivated by twelve oxen ; the lord of twenty villages was given five *kulas* of land ; the lord of one hundred villages was endowed with one village, and the lord of one thousand villages was assigned one town. The very primitive method of measurement, which is based on the number of oxen required for cultivation of the land, shows the antiquity of the institution. R. S. Sarma is of the opinion that "such terms as *bhogika*, *bhogapatika* and *bhogikapālaka* smack of feudal relations".[5]

In the Tamil country, soldiers were granted *mārāya* (military fiefs) for particular acts of heroism such as stemming the advance of enemy forces single-handed like a stone dam arresting the onrush of the river in flood.[6] The very rapid growth of the Gupta empire brought in a large number of princes who were allowed to retain their rule over their territories on the condition of paying certain fixed dues. Those warrior chieftains, who paid a fixed sum of money and were bound to supply a certain number of soldiers, when called upon to do so, resembled in many respects the feudal barons of Europe and were known as the *sāmantas.*

Thus, on the whole, a very large part of the cultivable lands was appropriated by the king, his family, his officials, his military lords and especially the priestly upper class which played a vital role in keeping the masses under subjugation by taking advantage of the credulity and superstitions of the intellectually less equipped people. A new production-relation in land was established through which the upper classes, standing in a special relation to the king, acquired enormous estates, depriving a large mass of the peasantry of the produce of its hard labour. The handful of Brāhmanas and Kshatriyas, who appropriated among themselves much of the land, served as the instruments through which the lower-classes were oppressed and kept down.

---

[1] S. Beal, *Hiuen Tsiang* (London, 1906), Vol. I, p. 88.

[2] *Mahābhārata*, XII, 87, 6-8.

[3] Manu, VII, 119.

[4] Brihaspati, XIX, 44.

[5] *Journal of Economic and Social History of the Orient*, Vol. I, Part I (London, 1957), p. 303

[6] *Maduraik Kānchi*, *ll.* 725-6.

Subinfeudation

Subinfeudation, which is regarded by some as an essential feature of feudalism, is also observed during this period. There were a large number of feudatory princes under the Sātavāhanas bearing the title of *rāja*, striking coins in their own names. Such princes existed in the Kolhāpur and North Kanara regions. These *rājas*, who held their territories of the Sātavāhana rulers, parcelled out their estates and granted large fiefs to vassals known as *mahārathis* and *mahābhojas*. The *mahārathis* granted lands and villages in their own names with all the fiscal immunities attached to such grants[1] and other privileges and duties. The *mahārathis* of Chitaldrūg region enjoyed the additional privilege of issuing coins in their own names. We possess a large number of coins issued by the *mahārathis* and *mahābhojas* under the Sātavāhana rulers.

The system of ruling through subordinate rulers was introduced by the Indo-Bactrians and continued by the Scytho-Parthians. The Sakas, and after them the Pahlavas (Parthians), used to govern their possessions in India through *strategoi* and satraps who were independent rulers for all practical purposes owing only nominal allegiance to the suzerain. Districts and other smaller units of the country were ruled by feudal military chiefs known as *meridarkhs*. On the whole, we are able to get a vague picture of a feudal hierarchy in the process of formation, ruling over many parts of the country during the period under consideration.

Immunities

There is evidence to show that some of the grantees of lands in the early Buddhist period enjoyed certain immunities. The *Arthasāstra* enjoins, "Those who perform sacrifices, spiritual guides, priests and those learned in the Vedas shall be granted *brāhmadeya* lands. yielding sufficient produce and exempted from taxes and fines (*adandkarāni*).[2] From the Chammak inscription, already quoted,"[3] we get a clear idea of the nature of the immunities granted to assignees. The village is not to pay taxes. It is not to be entered by the regular troops or by the umbrella-bearers of the king without whom the ruler himself would not enter. It was not to supply cows, bulls, flowers, milk, hides, charcoal, etc., which other villages obviously had to pay to the king. It was free from paying the customary pasturage and exempt from forced labour. Even the treasures and deposits, if any, belonged to the donees. The grant was made in perpetuity. These exemptions were in favour of the grantees, but the poor villagers were called upon to pay the customary taxes, levies, and services to the members of the priestly class to whom the grants were made. Kautilya holds that the learned Brāhmanas should not be subjected to any tax even in the case of emergencies.[1] The *Satapatha Brāhmana* declared more than once that while every thing is to be food (*ādya*) for the king, the Brāhmana is not to be fed upon.[2] As in Europe, immunity was first given to the Church (the priestly upper class) whereby the ruler and his representatives, were forbidden to enter the assigned villages to exercise any public function there. Fines went to the assignees and not to the ruler.

---

[1] Dr. Gopālāchāri in *A Comprehensive History of India*, Vol. II, p. 317.

[2] *Arthasāstra*, Book II, Ch. 1.

[3] See supra, pp. 158-59

Commendation

The institution of commendation is found in India as elsewhere. Indian commendation, especially of the early period, of which we have surviving evidence, was mostly from the top. The rulers and their feudatories transferred the population of the donated villages to the mercy and protection of the donees. The villagers seem to have enjoyed no personality ; nor had they any say in the matter of such transfer or abandonment. The donors not only transferred the right of collecting the dues but also withdrew from administering the donated areas. It meant that the donees became the *de facto* rulers of the donated villages with the right of collecting revenues, carrying on the administration and holding courts. A Sātavāhana inscription[3] of the first century B. C. surrenders the right of administration in the land granted to Buddhist monks. The Sātavāhana ruler Gautamiputra Sātakarni made a grant to the Buddhist monks in the 2nd century B. C. The area granted could not be entered by royal troops, molested by government officials or interfered by the district police.[4] By this pre-Christ inscription the right of administration of justice and maintenance of law and order was made over to the grantees who could exploit the population of the transferred land at will. The state would not play its moderating role.

The Gupta period furnishes several instances of grants of settled villages in which the residents—cultivators and artisans—are expressly ordered by their rulers not only to pay the taxes to the donees, but also to obey their commands. Besides, in a few inscriptions, the officers of the state are forbidden to interfere in the affairs of the donated villages. Commenting on the term *brāhmadeya*, Buddhagosha (5th century A. D.) says that the *brāhmadeya* grant carries with it judicial and administrative rights.[1] It cannot be argued that commendation of the population to religious people could not amount to a feudal commendation ; for as the "number of the land-owning *Brāhmanas* went on increasing, some of them shed their priestly functions and turned their attention to the management of land ; in their case, secular functions became more important than religious functions."[2]

---

[1] *Arthasāstra*, Book V, Ch. 2.

[2] *Satapatha Brāhmana*. V, iii, 3, 12 ; vi, 2, 3.

[3] *Select Inscriptions*, ed. by D. C. Sircar (Calcutta, 1942), p. 188.

[4] Ibid., pp. 192 and 194-95.

In addition to this commendation or abandonment from above, we have some evidence of commendation from below of the European type as well. The law book of Vishnu (c. 3rd century A. D.) states that in order to obtain wealth and security, the householder should apply to a lord.[3] An early mediæval Tibetan Buddhist text, which speculates, like Hobbes, on the origin of government, says that, because of the insecurity caused by theft the people made the strongest among themselves lords over their fields.[4] May be that this statement reflects the actual conditions. A Bihār inscription in the district of Hazārībāgh belonging to the 8th century A. D., published in the *Epigraphia Indica* states that the people of a certain village commended themselves to a merchant prince who afforded them protection by meeting on their behalf a demand made by their king for a due (*avalgana*).[5] With the king's approval, they resquested the merchant to become their rāja, and he readily agreed to do so.[6]

Oppressive Taxes

One of the main features of feudalism is heavy and oppressive taxation. Megasthenes reports, "besides the land tribute they pay into the royal treasury a fourth part of the produce of the soil.[7] One-fourth of the produce, as we have seen above, was the water cess from fields irrigated with easily available water.[8] The land-tax proper varied according to the nature of the land, the meanest class of land paying one-sixth of the produce as the king's share.

In addition to these fleecing taxes, several other imposts were made on the villagers. *Kara*, ground tax in cash, was a periodical payment by the villagers, *uparikara* was an extra-cess[1], *udanga*, an extra-impost, and *halirākara*, a plough-tax. A few periodical collections were undertaken in the name of winds (*vātas*) and spirits (*bhūtas*). There was an emergency levy called *pranaya* (the gift of affection) which reminds us of the 'benevolences' levied by the English feudal kings. Again, as we have seen in the Chammak grant, the villagers had to pay cows, bulls, flowers, pasturage, hide, charcoal, etc.

---

[1] *Pāli-English Dictionary*, see under *brāhmadeya*.

[2] R. S. Sarma in the *Journal of the Economic and Social History of the Orient*, Vol. I, Part I (1957), p. 300.

[3] Vishnu, LXIII, 1.

[4] Rockhill, W. W., *The Life of the Buddha* (London, 1907), pp. 6 7.

[5] *Epigraphia Indica*, II, 27, *ll*, 6-7.

[6] Ibid., II, pp. 1-10.

[7] McCrindle, *Megasthenes, and Arrian*, pp. 41-42.

[8] See supra, p. 143.

The economic burden imposed on the mass of the people and the cruel treatment meted out to the cultivating class is justified by the theorists of the time. The *Brāhmanas* characterize the king or the Kshatriya as the devourer of his folk. The *Aitreya Brāhmana* describes the Vaisya as one "paying *bali* to another, to be eaten by another, to be oppressed at will."[2] The *Satapatha Brāhmana* declares more than once that "while everything is to be food (*ādya*) for the king, the Brāhmana is not to be fed upon."[3] The Kshatriya, whenever he likes, accosts, "Hullo Vaisya ! just bring to me what thou hast stored away."[4] "Sesamum, O Lord !" advised a minister, "does not yield oil unless it is made to cry, torn to pieces, oppressed and pressed ; so also, O King ! is the kingdom."[5] Thus, there was a sinister agreement between practice and theory, springing out of it, that the poor tillers of the soil were to be crushed and tyrannised to surrender the fruits of their labour to the superior classes.

Forced Labour

Free cultivators were forced to work on the lord's fields ; for the feudal magnates obtained from the king not merely the right to collect taxes but definite plots of land as well. The common artisans worked for one day in a month in the manner demanded by the king or the feudal lord. The institution of forced labour is observed in most of the ancient societies. It was so common in the days of Kautilya that the village and town accountants were required to keep an account of the men engaged in forced labour.[6] In the Chammak copper plate, quoted above,[7] the Siwani copper plate inscription,[8] the Ganeshgarh plate of Dhurvasena I,[9] the Pardi pillar inscription of Dharasena[1] and the Sūrat plates of Vyāghrasena,[2] the lands were granted with exemption of all taxes and forced labour due to the ruler. It seems that the peasants of a donated village did not render free service to the king but gave it to the grantee ; for the Palitāna plates of Dharasena II,[3] the Navalākhi plate of Silāditya I,[4] and the Valabhī grant of Dhurvasena III[5] give the donee the same kind of right to demand forced labour (*vishti*) as the king had.

---

[1] J. R. A. S., 1931 p. 165.
[2] *Aitreya Brāhmana*, VII, 92.
[3] *Satapatha Brāhmana*, V, iii, 3, 12 : iv, 2, 3.
[4] *Sacred Books of the East*, Vol. XII, p. 82.
[5] *Mahābhārata* (Cowell and Neil's edition), p. 563.
[6] *Arthasāstra*, Book II, Chapter 7.
[7] See supra, pp. 168-169.
[8] Fleet, p. 235.
[9] *Epigraphia Indica*, Vol. III, p. 318.

Slavery

In the *Malindapanha*[6] the sale as well as the pledge of a son by a father involved in debt or having no livelihood figures as an acknowledged custom. Wives, caught in the act of adultery, were enslaved.[7] Slaves were articles of sale, gift, mortgage, and inheritance. We learn from an incidental reference in the *Divyāvadāna*[8] that, as in the Kautilyan law, a female slave bearing a child to her master was at once freed with her offspring.

With the rise of feudal elements and with the availability of less costly serf or semi-serf labour, the number of slaves seems to have diminished. In the earlier periods, slaves were mostly employed as agricultural labourers ; but now slaves were, to a larger part, confined to 'impure' domestic work—sweeping the gateway, the privy, the road and the place of rubbish, shampooing the secret parts of the body, gathering and throwing away the leaves used for taking food on, disposing of ordure and urine and massaging the master's limbs, when desired.[9] Moreover, washing of the feet of her master, after his return form outside, was one of the duties of a maid slave.[10] The master might let out the services of slaves,[11] male or female, and thus make them a source of income, for slaves had no *suyam*.[12] Female slaves were very often acquired for sexual enjoyment. Sometimes they were let out for this purpose and their offspring accepted as interest. The fine for outraging another's female slave was two *panas* a day.[13] In Tamil Nād women captured in war were reduced to slavery and employed as servants in temples.[14] They maintained themselves by prostitution.

---

[1] *Epigraphia* .a, XI, p. 51.
[2] Ibid., XI, p. 219.
[3] Ibid., XI, p. 80.
[4] Ibid., p. 174.
[5] Ibid., p. 85.
[6] *Malindapanha*, p. 279,
[7] Ibid., p. 158.
[8] *Divyāvadāna*, p. 25.
[9] Nārada, V, 5 and 7.
[10] *Mrichchhakatika*, III, pp. 83-84.
[11] *Arthasāstra*, II, Chapter 24.
[12] Nārada, VIII, 11 and 13.
[13] Legge, *A Record of Buddhist Kingdoms*, pp. 42-43.
[14] *Pattinapālai*, *ll.* 246-9.

Condition of Labourers

The position of labourers under feudal conditions could not have been happy. Labourers were transferred like chattel along with the land on which they had settled. Fa-hsien clearly states that the ministers were given fields and gardens with husbandmen and cattle to cultivate them. Varāhamihira in his *Brihatsamhitā* refers to the numerous instances of general poverty and misery of the people from the pernicious combination and influence of the stars and planets.[1] Justice was corrupt and favoured the wealthier or more powerful.[2] Most of the labourers had to "pass their days in servile work"[3] and had to do "low services."[4] The services were not only low but sometimes extremely immoral as well. Even at an earlier period the status of hired labourers was much lower than that of hired cultivators,[5] and the condition in the later society, on its way to the complete formation of feudalism, appears to have been much worse.

Labour Regulations

Hired labour was employed in agriculture, pasturage, industry and trade. Sometimes domestic servants were engaged for wages. The wages were very low. Default in the performance of the work entailed forfeiture of wages or fines or both. One abandoning work before or after receiving wages is to forfeit the same or pay twice the amount as the case may be.[6] A workman, whether well or ill, not performing work according to specification, is to lose his wages though his work may remain only slightly incomplete.[7] One, not performing work at the proper time and place, or otherwise causing less profit, is to get just as much as the master pleases to give him.[8] A washerman is not to wear or sell or hire or pledge his employees clothes. When a workman does his work according to specification even belatedly after recovering from an illness, he is to receive full payment.[9] If a servant causes extra profit as the result of disregarding time and place, he is to receive additional payment.

Agriculture

Agriculture forming the main source of the king's income, he took many measures to improve it. The Budhist and the Jain *samghas* which owned large estates also took a keen interest in the production of grains. Wilful destruction of grain was punished and if animals damaged

---

[1] See Maity, *The Economic Life of Northern India in the Gupta Period.*

[2] *Mrichchhakatika*, IX, pp. 260-1.

[3] *Brihatjātakam*, XXII, 15, p. 215.

[4] Ibid., XVIII, 3, pp. 263-64.

[5] Brihaspati, XV, 10, 13.

[6] Yājnavalkya, II, 193.

[7] Manu, VIII, 217.

[8] Yājnavalkya, II, 195.

[9] Manu, VII, 216.

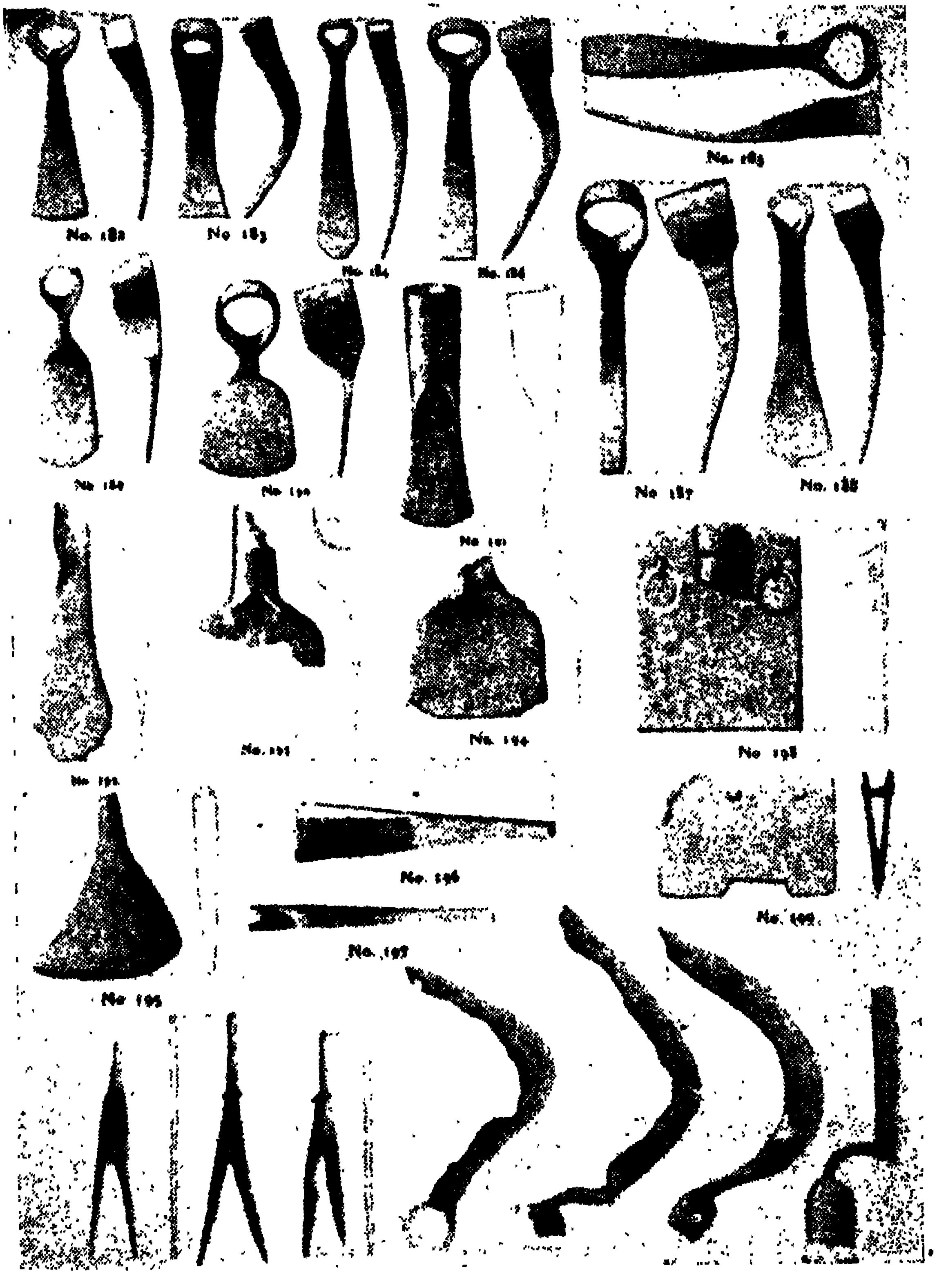

PLATE XX

Some of the iron implements of agriculture and other crafts of this period the crop, the herdsman was taken to task. Cultivation mostly depended on rain water, but irrigation (natural as well as artificial) was also used on a fairly large scale. Artificial canals, tanks and wells are mentioned in the literature of the period.

As in the earlier periods, ploughs drawn by oxen were used for cultivation. The iron ploughshare should have been quite common, for Brihaspati prescribes that the iron should weigh twelve *palas* and be eight *angulas* long and four broad.[1] Land was ploughed once or twice or thrice according to the industry of the cultivator before sowing. A sickle was used to reap it. The crop was removed to the threshing floor, where it was threshed and winnowed.[2] The *Malindapanha* tells us that there were three regular rains in the year besides others which were occasional,[3] and from the same source we learn that rice fields were provided with water courses as well as embankments for storing water and bringing the crops to maturity.[4] In another passage the successive agricultural operations are described as removing weeds, thorns, and stones from the soil, ploughing, sowing, irrigating, fencing, watching, reaping and threshing.[5] The medical works of Charaka and Sustruta contain elaborate classification of cereals, fruits, and vegetables accompanied by descriptions of the characteristic qualities of each of them. A fine variety of rice (*sāli*) is described as fit for use by kings. Among aromatics, the *Malindapanha*[6] mentions camphor, aloes, *tagara* (a nice smelling shrub) sandal-wood and saffron. Pepper, according to the *Periplus*, was grown in the district of Cottonara (Kottanādu), the territory around Quilon and Kottayam. Macair bark came from the Himālayas and the hills of South India. The Chēra country was noted for turmeric. The fertility of the land watered by the Kāvēri is a recurring theme, and one of the poets affirms that the produce of the small area on which a female elephant could lie down was enough to feed seven tuskers. The cultivation of millets is described at some length in one of the Tamil poems of the period.

The *Brihatsamhitā*[7] gives elaborate instructions concerning the plantation of trees. Among fruits, the *Amarakosa* gives the names of the mango, the palmyra fruit, the orange, the jack fruit, the pomegranate, the grape, the banana, the cocoanut and the wild date.[8] The names of a large number of trees (big and small), shrubs, grasses, aquatic creepers and plants are mentioned in the works of Kālidāsa. He mentions the strong *deodara*, the *sārala* pine, the religious and the ordinary fig tree, banyan trees of two kinds, the silk cotton tree, the produce of which was used for stuffing purposes, the light and soft but quite strong *sāl*, the fragrant flower-bearing *saptaparna*, the shady *nameru*, the *sarisa*, the *madhuka*, the *kakubha*, the *sallaki*, the *arjuna* (a kind of teak) the *tilaka*, the *kalama* and a large number of smaller trees, creepers, etc., very laboriously picked out by B. G. Upādhyāya[1]. All the crops we have noticed in the previous chapters continued to be grown in this period also and several new varieties were added either by improving wild corns or by new discoveries of edible ones or by import from foreign countries. Transplantation of rice seedling was known to the Indian peasant.[2] *Kālidāsa* mentions three varieties of rice—*sāli* (a very good variety), *kalama* and *nivāra*.[3] Among the vegetables, the *Amarakosa* mentions cucumber, onion, garlic, pumpkin and gourd. Besides oil seeds and spices, observed in the foregoing chapters, we get some more names in the literature of the post-Christian centuries. Mustard seed, linseed, *lodhra*, red *lodhra* ; tamarind, *ingudi*, *pryangu*, black mustard, fragrant grass, betel-leaves, betel-nuts, turmeric and saffron.[4] Cotton was cultivated in many parts of India, and soft vegetable fibres for stuffing matresses were known. Flax and hemp also seem to have been cultivated here and there.[5]

---

[1] Manu, VIII, 79-80. The weight of the ploughshare was to be about one pound and the length 6 inches.

[2] *Amarakosa*, IX, pp. 202-205.

[3] *Malindapanha*, p. 114.

[4] Ibid., p. 416.

[5] Ibid., p. 360.

[6] Ibid., p. 382.

[7] *Brihatsamhitā*, LV.

[8] *Amarakosa*, pp. 90, 124, 353 and 356.

Sometimes destruction or less production due to flood, drought, pests, etc., occurred in different parts of India. There is ample evidence of artificial irrigation. Nārada mentions the *kheya* which is dug into ground to allow water to flow and the *bandhya* which prevents the flow of water.[6] The inscriptions of our period speak of *vāpi*,[7] *tadāga*,[8] and *dirghika*,[9] all meaning tanks big or small and also of wells *kupa*.[10] Some of the lakes were very large like the Sudarsana lake which burst out in the Gupta period causing great distress to the people and which was repaired by the Gupta governor, Chakrapālita.[11]

---

[1] B. G. Upādhyāya, *India in Kālidāsa* (Allāhabād, 1947), Chapter II, pp. 31 seqq.

[2] *Raghuvamsa*, IV, 37.

[3] *India in Kālidāsa*, Chapter II.

[4] *Amarakosa*, pp. 88 seqq.

[5] Ibid., p. 204.

[6] Nārada, XI, 18.

[7] Fleet, p. 75, 166.

[8] Ibid., pp. 75, 199.

[9] Ibid., p. 75.

[10] Ibid., p. 76.

[11] Ibid., p. 56.

Animal Husbandry and Animal Wealth

Steps were often taken to improve the breed of cattle. The *Matsya Purāna* lays down that the Brāhmanical bull must have elevated shoulders and hump, a soft and strait tail, tender cheeks, broad back, shining eyes, sharp horns, thick hair at the end of the tail and eighteen healthy teeth. The bull must be well-built, roaring like thunder, high in stature and walking like an elephant.[1] Such a bull was set at liberty for breeding purposes marked with the sign of dedication. No fine was to be imposed on the person who set it free for the damage done by it.[2]

About this time the cow seems to have become an object of worship. Most part of a canto of the *Raghuvamsa* is devoted to the worship of a cow by king Dilipa and his queen Sudakshina.[3] In the Allāhābād inscription Sāmudragupta is described as the giver of many thousands of cows.[4] The Sānchī stone inscription of Chandragupta II states that whosoever shall interfere with the gift shall be invested with the guilt of the slaughter of a cow or of a Brāhmana.[5] Manu equated a cow with a horse,[6] and in the Gupta period it was equated with a Brāhmana.

In addition to the animals noted in the previous chapters, Amara and others mention the lion, the tiger, the hyena, the bear, the jackal, the porcupine, the antelope, various kinds of deer (including the ox-deer and the musk-deer) and the wolf. The buffalo seems to have been tamed. The *Raghuvamsa* mentions the mule (*vāmī*) and the camel.[7] We also get references to the boar, the rhinoceros, the bison, the yak, the cat and the mouse. Fish, the crab, the frog, the turtle, the shark, the crocodile, the pearl oyster and the conch-shell are the aquatic animals mentioned by Kālidāsa which have an economic value. Whales and hippopotamuses are also mentioned by Kālidāsa.[8] We get mention of the pigeon, the falcon, the owl, the heron, the fowl, the crane, the cuckoo, the kite, the vulture, the parrot, the goose, the duck and the peacock. In the Tamil Sangam literature of the South many more birds are mentioned in addition to the quadrupeds of the South. The Chēra (Kērala) country was famous for its buffaloes and elephants. As regards the wild beasts of South India, there are two references to the lion in the *Padirruppāttu*. Sounds made in the morning by the tiger, the bear, and other animals encaged in the managerie of the royal place is referred to. Even in shallow waters the crocodile is said to prevail against an elephant, and there is a charming pen-portrait of a rabbit in three short lines. Kālidāsa has referred to several kinds of serpents, locusts and many other insects.[1]

---

[1] *Matsya-Adhyāya.*

[2] *Raghuvamsa*, II, 21.

[3] Ibid., p. 32.

[4] Fleet, Vol. III., p. 8.

[5] Nārada, XI, 33.

[6] Manu, VIII, 296-298.

[7] *Raghuvamsa*, V, 32.

[8] *India in Kālidāsa*, Chapter II.

Flesh, fat, sinews, bones, horns, hoofs, hides, ivory, shells, teeth, skins, wool, tails, feather and plumes of the animals had an economic value. Leather was used for making shoes, carrying water and making small vessels such as oil containers. Skins of tigers, dear and other wild animals were used by ascetics and others. Articles of art, luxury and decoration were made of ivory. Musk was taken from the musk-deer. Silk clothes were worn by the rich, and there is reference to silk-weaving, but it is not clear if silkworms were bred in India. Wool and fur were used for making warm clothes, blankets and carpets. Honey was used for food and medicine and bee-wax for various purposes. The aboriginal hunters, fishermen and snake-charmers depended on catching these animals for their livelihood.

Forestry

Forests must have been much larger and more mumerous than at present. Many forest regions seem to have formed independent kingdoms. On his way to Kalinga, Samudragupta is reported to have defeated all forest kingdoms he came across.[2] The Khoh copper plate of Hastin mentions eighteen forest kingdoms which he inherited.[3] Varāhamihira refers to the forest kingdoms lying in the North-Eastern region of India.[4]

Forests helped to promote rainfall and to bind the soil and prevent it from being washed away. They aided in retaining the moisture of the land and making its yield more rich. In the previous chapter we have noticed the forest products detailed by Kautilya and others. Among other things yielded by forests, Kālidāsa mentions the sacred skin of *ruru* (spotted deer) and musk obtained from the navel of the roaming deer.[5] Lac (*laksha*) furnishing women with their various dyes and yak-tail commonly used as a symbol of royalty and as a fly whisk are also mentioned. Elephants were caught from the forests of Kāmarūpa, and Anga.[1] The Himālayan region, besides yielding mineral dusts of various kinds, grew the *sāl* in large quantity which served as very good wood for building purposes. In the South the most common forest products included timber, bamboo, jack fruits, the *valli* root and honey. Hill slopes all over India were used as pastures.

---

[1] See a full list of the animals mentioned by Kālidāsa in the book by Upādhayāya, *India in Kālidāsa*, Chapter II.

[2] Fleet, p. 7.

[3] Ibid., p. 114.

[4] *Bṛhatsamhitā*, XIV, 29-30.

[5] *Ritu*, VI, 12.

Parks for pleasure, gardens growing flowers, vegetables and other edibles and orchards bearing many kinds of delicious fruits abounded in the neighbourhood of cities and townships. Trees and plants were nurtured with fostering care and often ladies watered them with loving hands. Kālidāsa says that it was a pleasure to see the daughters of hermits watering the tender plants of the hermitage with small jars.[2] Obviously, as in the days of the Mauryas, there were officials appointed to look after the forests and supervise forest industries during the subsequent periods also.

House Building

House building in North India does not seem to have regained the level of the Indus valley civilization even during the later half of the first millennium A. D. But there was a slight improvement during the Gupta period on the earlier Āryan periods. Hitherto, houses were usually constructed of perishable materials like wood and bamboo. Now we see houses and monuments being built of non-perishable materials such as brick and stone. The contemporary inscriptions speak of a large number of temples and cities of great beauty and magnificence erected during this period. Huan Tsang tells us that the country was studded with a large variety of buildings. Most of these buildings have, however, perished. A few that have escaped destruction betray primitiveness and lack of technical skill. Some temples, like the Bhītargāon temple, are made of brick. Of the stupas built during the period some were of brick like the one at Mīrpur Khāss and others had a brick superstructure with the basement solidly built of stone.

In the South, kings' palaces and mansions of rich merchants and nobles were built of brick and lime mortar, and were sometimes more than one storey high. The Tamil work, *Nedunālvādai*, gives a minute account of the building of a palace and describes the luxurious style of the furnished interior including the women's appartment and bedrooms. Gold and silver plates were used by the royal family. The common people lived in huts. In the *Puranānūru* we have the charming description of a hut on the roadside with its live fence and open yard.[3] Beds in the houses of the rich were made of hides stuffed with straw, and the common man had to be content with mats. Many went even without the latter as is the case even to-day (1962). The middle class used rope cots made by Puliyar who handled their needles with deftness.[1]

---

[1] *Raghu*, IV, 40, etc.

[2] Ibid., XIV, 78.

[3] *Puranānuru*, 116, *ll.* 1-7

Stone Work

What the pre-feudal Indians lacked in the field of building, they partly compensated by cave excavations which involved no architectural problems and by building temples and some other structures with dressed stone. Rock-cut excavations were practised on a larger scale in the earlier period. This work was continued during this period also with certain improvements. In the Chaitya-type halls the earlier plan is retained "but with extensive changes in the ornamentation of the facade and in the designs of the pillars." In certain cases the ornamentation is richer and more minute in detail, though it is rather coarser and lacks the proportion and rythmic balance of the earlier decorations. The most significant innovation noticed in the caves of this period "is the wealth of figure sculptures which are made to cover every possible space, both in the exterior facade as well as in the interior, in place of the plainer architectural patterns of the earlier caves. The facade, no doubt, is a further development of the earlier types."[2]

Although temples form the most important class of monuments, there are a large number of stupas and monasteries as well. Idol worship being the chief pattern of worship, the Gupta sculpture abounds in human figures, divine as well as lay, of both the sexes, in most cases detached from the animal or vegetal world. It was during this period that sculpture in stone becomes a universal pattern in India from Sārnāth in the North to Māmallapuram in the South.

Pottery

The local potters of the Saka period, like their predecessors of the Greek period, continued to produce ordinary kinds of domestic vessels, most of which are still familiar in the Punjāb—store-jars, water-pots, vessels for milk, wine and oil, cooking-pots, jugs, cups, bowls, basins, pans, dishes, etc. Græco-Bactrian influence is found in the beakers with deep flared mouths, earthen inkpots, copied from the copper and bronze ones introduced by the Greeks, and in the round water-bottle with pierced lugs on each side. There have been found shallow plates of grey ware on which the designs were roughly incised on the surface and picked out with red paint. The plates look rather like crude attempts at imitating some Hellenistic silver plates. "The terra-cottas of the early Saka period are few and call for little comment."[1]

---

[1] *Puranānūru*, 317, *ll.* 3 and 82.

[2] Prof. S. K. Saraswati in the *History and Culture of the Indian People*, Vol. III, pp. 466-468.

The most distinctive class of pottery of the period covered by this chapter is the *red ware*. It occurs with the Sātavāhana sites in the Deccan, Kshatrapa in Western India and Kushāna and early Gupta in Northern India. The pottery is made of an extremely fine levigated clay, and is burnt uniformly to a brick-red colour. The outer surface has a fine polish varying from a lacquer red to a dull brown ; some of the vessels are extremely thin. The treatment of the clay and the very high firing give almost a metallic note when it is struck.[2]

Along with this, other types are found in different regions in grey or dark ware. The older forms also continue. Some of the sites in Northern India have produced pots which were made of clay mixed with mica. The pottery of this period included cooking vessels of different sizes, various types of bowls, jars big and small, incense-burners, *gharās* of many sizes, a stand for a jar, a goblet, pot-lids, and several other pieces. Many of these vessels are decorated with various patterns. The form of the water-jars is that of a short-necked bottle with a bulging belly and an attractive animal spout.

One of the commonest examples of a pot at Ajanta is the spouted water-jar, a form which is found commonly on the Sānchī and Bārhut bass-reliefs. "Besides this, there are two main types of pots. The first is round-bottomed with substantial rolled rim and a neck of varying length. Squat pots of this kind with wide mouths are made in diminishing sizes to stack one upon the other. They were often also, as now-a-days, enclosed in a rope net for hanging up. The second type has a rimmed foot and a long neck flaring outwards at the mouth. The ordinary drinking vessel seems to have been a shapely little cup, with a flat narrow-necked foot. In the fresco in the verandah of cave XVII each of the holy men at the feet is provided with two or three of these cups set on a flat platter-like dish. These tray-like dishes often appear at Ajanta. They were of all sizes and some seem to have had slip-decoration in stripes."[3]

The art of making terra-cotta figures is one of the most ancient ones. We get samples of this art dating much before the Indus valley civilization. "In the modest medium of clay those gifted clay-modellers created things of real beauty and satisfied a popular demand at the cheapest possible rate." On festive occasions terra-cotta figurines were in great demand because parents gave cash presents to children who went in for these figurines. India being an idolatrous country, terra-cotta figures of gods and goddesses served a religious purpose. In the *Sakuntala*, the child Bharata plays with a coloured clay-peacock. There is also a reference to Rohasena's clay toy-cart in the *Mrichchhakatika*. Most of the terra-cotta figures of this period are of gods and goddesses. Still there are numerous figurines of a non-religious character. In the Tamil country pretty idols and dolls were made of wood or the soft pith of the *ladai* (a very light wood).

---

[1] Marshall, *Taxila*, Vol. I, p. 133.

[2] *Baroda Through the Ages*, Appendix I, p. 56.

[3] Codrington's article on Ajanta frescoes in the *Indian Antiquary*, 1930, p. 171.

Metal Work

Greek writers mention gold mines which were worked in a primitive way. Nearchus, as we have already seen, speaks of the casting of bronze. There is evidence of ancient mines in Dardistān. Copper, gold and silver articles of great artistic value are found among the Mauryan art collections. Iron articles and weapons, as we have noticed, were in full use in the later half of the first millennium B. C. Amara[1] and Kālidāsa,[2] both belonging to a much later period, refer to mines.

We have seen that copper is the earliest metal known to the world. The Singhbhūm copper belt, which starts from a point about five miles north of Chakradharpur in the west and runs through Karuyadungi and Rangadih has three more or less parallel runs of ore. The ancient pieces collected around this belt show that it is one of the earliest centres of copper resources in India. There appears to have been a gold mine. in the south-western portion of the *parganah* close to the Mayūrbhanj border south of the village of Kundrukochcha.[3]

Definite archæological evidence of the working of some of the mines is furnished by the Kushāna-type coins buried on the sites.[4] Although silver was used for many purposes, and we get mention of the metal in the literature of the period, and the metal itself in the art collections, there is no evidence to prove that silver was as yet mined in North India.[5] It is probable that the metal was imported from Afghānistān or came from the South. In addition to copper, bronze, gold, silver and iron, already noted, the *Amarakosa* mentions brass, lead and tin. The *Raghuvamsa* refers to the blacksmith heating and beating a piece of iron with the help of a steel hammer (*avoghana).*

---

[1] *Amarakosa* , 3, 7, pp. 47-48.

[2] *Raghuvamsa*, III, 18 ; XV, 66 ; XVIII, 22.

[3] Murray, *J. A. S. B.*, VI, 1940, pp. 82-83.

[4] For more details see the *J. A. S. B.*, 1940, pp. 100-101.

[5] Cunningham, *Coins of Ancient India*, p. 5.

The literature of the period mentions spades, sickles, ploughshares chains, swords, spears, arrows and knives made of iron. Archæologists have discovered axes, chisels, hammers, a padlock, a door ring, a spoon, a hatchet, and a small iron pot.[1] The Meharauli iron pillar of king Chandra (Chandragupta II) is of immense size weighing six tons. It is a standing monument of Indian workmanship in iron. A large number of exquisite bronze, copper and brass statues of this period have been discovered and a large number of gold and silver pieces of jewellery and coins recovered. The pearl fishery was a flourishing industry in Tamil Nād and a large variety of precious stones was available in different parts of India.

The ornaments of an actress, obviously of the royal court, described in the *Chilappathikāram* give us an idea of the high level of the art of jewel-making and the precious materials available during the period : "She had pretty rings on her little toes. On her feet she wore an ornament resembling a string of petals overlapping each other, and extending from the ankle to the big toe ; and on the ankle itself she wore four anklets, one of which consisted of a row of little golden bells, and another golden wire plaited in a beautiful design. On her thighs she tied the thigh clasp. Round her waist she wrapped, in graceful folds, a piece of fine blue coloured muslin, and over it she fastened a girdle of two and thirty strings of lustrous pearls. Above her elbow she wore superb armlets made of brilliant gems and pearls chased in gold, and on her forearms various bracelets, some made of polished shells and some of coral, some of plain gold and some exquisitely engraved and set with diamonds and emeralds. Rings of various patterns she put on her fingers : one shaped like the mouth of a *makara*, and another which had a big emerald in the centre and a row of diamonds set round it. On her neck she wore many kinds of necklaces which covered her bosom from the neck to the navel ; one of them was like a golden chain ; another was a string of beautiful beads, and another a string of pendant golden leaves. A splendid clasp, which covered the back of her neck, held the necklaces in their positions. Her ear-rings were set alternately with large diamonds and sapphires. On her head she fastened a net-work of ornaments which exceeded in beauty all her other jewels."[2] Kālidāsa mentions two gems called *sūryakānta* (sun-glass) and *chandrakānta* (moon-glass) which were two kinds of precious crystals.

Other Arts and Crafts

The textile industry made a great stride and the finest cotton cloth was made in India and exported to countries as far off as Rome. Tailoring became an established industry and the dress of men and women became more and more complex. Dyeing and embroidery were quite well known. The manufacture of cloth was the most important industry of Tamil Nād after agriculture. Production was generally for local consumption, and only articles of great value left the shores of the land. Salt was one of the articles of export. Shipbuilding seems to have been a flourishing industry in the South. We find allusions to artisans skilled in repairing and refitting of ships.[1] Mills for crushing sugarcane to make jaggery were common in the countryside of South India.[2] Manufacture of oil was another essential industry. Cosmetics, perfumes and unguents were used by men and women. Kālidāsa mentions a large number of these articles of luxury in several of his passages. Sandal paste and sandal oil were in common use. Liquor was produced throughout India. The entire army of Raghu is reported to have drunk *tādī* (juice extracted from palmyra or cocoanut flower sprout and fermented).

---

[1] Archæological Survey of India (Annual Report No. 16), 1911-1912 p. 92.

[2] *Chilappathikāram*, VI, 76 to 108 ; V. Kanakasabbai, pp. 119-20.

Guilds

In addition to the guilds we have observed in Chapter V, we notice a guild of architects in the *Raghuvamsa*.[3] In the *Mudrārākshasa*, Chānakya enquired, "O Guild President, Chandanadāsa, are the interest and profit accruing from fair mercantile transaction going on well ?"[4] This Chandanadāsa was the president of a jewellers guild.[5] Varāhamihira refer to guilds and their presidents at several places.[6] We get epigraphic references to the guilds of oilmen[7] and silk-weavers.[8] In the Pahārpur inscription[9] and in the Dāmodarpur copper plates[10] the term *nagara-srithi* appears. Literally it means the great merchant of the town. Sātavāhana inscriptions speak of corn-dealers, florists, weavers, oil-pressors, manufacturers of water-wheels, braziers, polishers, iron-mongers, artisans, writers, leather-workers, perfumers, goldsmiths, jewellers, stone-polishers, stone-masons, and carpenters. The Mandasor inscription of Kumāragupta and Bandhuvarma records the building of a grand temple by the silk cloth-weavers' guild with the great wealth acquired by it. These clever manufacturers did not fail to insert the following advertisement of their commodities in the inscription : "Just as a woman, though endowed with youth and beauty (and) adorned with the arrangement of golden necklaces and betel leaves and flowers, goes not to meet her lover in a secret place until she has put on a pair of coloured silken garments, agreeable to the touch, variegated with the arrangement of different colours (and) pleasing to the eye...."[1]

---

[1] *Padirruppāttu*, 66, *l.* 18 ; 76, *l.* 4.

[2] *Purananūru*, 322, *l.* 7, *Pattinappālai*, *ll.* 9-10.

[3] *Raghuvamsa*, XVI, 38.

[4] *Mudrārākshasa*, I, p. 30.

[5] Ibid., I, pp. 18, 20, 28.

[6] *Brihatsamhitā*, IV, 13 ; X, 13 ; XXII, 18 ; XXXIV, 19-20.

[7] Fleet, Vol. III, p. 68.

[8] Ibid., p. 59.

[9] *Epigraphia Indica*, XX, p. 61, *l.* 1.

[10] Ibid., XV, p, 130, *l.* 4 ; p. 133, *l.* 4 ; pp. 138-9.

An inscription at Nāsik[2] dated about 120 A. D. tells us that Ushavadāta, the son-in-law of the Saka Satrap Nathapāna, deposited permanently 2,000 *kārshāpanas* with a weavers' guild at the rate of one per cent per month, and 1,000 with another (also of weavers) at ¾ per cent per month. Moreover, there is ample evidence to show that guilds during this period received deposits from charitable persons to perform certain religious or charitable functions.[3] These guilds could have resembled the early European guilds which had a religious tinge.

Inland Trade

Inland trade, which was active and minutely regulated in the previous periods, continued under less control during this period. Pepper, sandal wood, coral and pearls from South India reached the towns of the North and yak tails from the Himalayan region were carried to the Tamil kingdoms. Elephants from Kalinga, Anga and Kāmrūpa reached all parts of India. Horses from Central Asia came through the North-Western passes and were taken to the different parts of the country. Gold came from the Persian Gulf region, silver from Afghānistān and mica from South India. Iron from the Deccan and Bihār was an important article of inland trade. The country got its salt supply from the sea coasts of South India and the Salt Range in the Punjāb.

The growth of feudal elements during this period naturally led to centrifugal tendencies which resulted in the slackening of control and supervision of trade. Dishonest dealings were prevalent in the country. It was said that a merchant who was not a cheat, a goldsmith who was not a thief, and a courtezan who was not greedy, were hardly possible to find.[4]

The Market

We have quoted in the previous chapter a graphic picture of the market place of Madura in the South.[5] Kālidāsa has given some details in the *Raghuvamsa* about the bazaar *(vipani)* of a northern town having shops on both sides of the highway. There were big traders (*pradhāna vyāpārinah)* and smaller ones. The articles of local trade included commodities for every day use such as milk, curds, butter milk ghee, honey, bee-wax, lac, pungent condiments, liquids used for flavouring, spirituous liquors, meat, boiled rice ; sesamum, soma juice, flowers, fruits, precious stones, male and female slaves, poisoned weapons, salt, cakes, plants, garments, silk, skins, bones, blankets, animals, earthen pots, vegetables, ginger, herbs, dry wood for timber and fuel, *kurba* grass, fragrant substances, *ingudi* plants, cotton thread, and articles of metals, flowers.

---

[1] Fleet, III, p. 85.

[2] Select Inscriptions, Vol. I, p. 157.

[3] Fleet, Vol. III, pp. 38, 40, 41 and 68.

[4] *Mrichchhakatika*, V, pp. 144-5.

[5] See supra p. 129.

Foreign Trade

Trade with China, Ceylon, Persia, Arabia, Ethiopia and the Byzantine empire was carried from the ports on the west coast such as Kalyāna (Calliena) and Vijayanti and the ports of South India. Goa was an important Sātavāhana port. Overseas trade was flourishing in spite of the great dangers of the sea voyage in those days. The *Sakuntala* mentions the death of a great merchant of Hastināpura due to shipwreck. Fa-hsien has given a vivid description of the dangers of a sea voyage from Ceylon to China.[1]

India exported pepper, cloth, castor oil, elephants and spikenard to Ceylon which formed the intermediary between India and Europe for several articles. Root-nard produced an oil which was used by the Romans as perfume and ointment, while leaf-nard (spikenard) according to Pliny held the first place among unguents. The costly spikenard oil was in great demand among the Romans as an ingredient in cookery and drugs, and rich ladies of Rome used to anoint their guests at banquets with it. Horses from Turkistān and Persia reached Ceylon through India. Products from the South were exported to Europe from the great ports of the South such as Korkai, Sāliyūr (near Madurai) Ilandriyan, Kāviripattinam (Puhār). Most of the other articles of export noticed in the previous chapters continued to be exported during this period also but to a lesser degree.

Foreign ships (mostly Arabian) came laden with horses in the company of merchants who were eager to take the precious products of the Tamil country in exchange for them.[2] Horses did not thrive in the South. Hence a large consignment of these animals had to be imported by the Pāndya, Chola and Chēra kings for war purposes. Ilandriyan was the favourite port of the horse dealers. Near the port was a large lighthouse in which a bright lamp burnt all night.[3] Merchants

[1] Legge, pp. 111-114.

[2] *Maduraik Kānchi, ll.* 317-25.

[3] *Perumban, ll.* 346 51

brought to the port of Puhār bags of black pepper, gems and gold from the northern mountains, pearls of the southern and coral of the western sea, produce of the Ganges basin and the Kāvēri valley, foodstuff from Ceylon and luxuries from Kadaram besides other rare and precious products.[1] Mention is made of the abundance of quartzite precious stones in the hills of the Chēra country.

Pliny mentions that India exchanged brass or lead for precious stones and pearls[2] in the later half of the first century A. D. Copper came probably from Carmenia and tin from Spain by way of Egypt. Gold and silver vessels were imported into Barygaza for the use of the royal family. On the other hand, the manufacture of iron articles in India had so well advanced that they were exported abroad in large quantities especially from the South. In addition to the local gold, this precious metal was imported from the Persian Gulf and perhaps from Siberia as well. A very large quantity of gold poured into India in the first few centuries of the Christian era in return for articles of luxury from India. Pliny reports that the great drain of Roman gold and silver coins on account of imports from India amounted to 550,000,000 *sesterces* every year.

The *Periplus* mentions pearl fisheries at Korkai, and in the Gulf of Mannār and the Palk Strait as well as in the lower Ganges. According to the same authority, Roman ladies not only wore pearls set on finger-rings and ear-rings but also had them set on their shoes. Agate and Carnelian were worked from the rocks of the Deccan. Ptolemy rocords that the Satpura range yielded sardonyx.[3] Roman authors give a long list of Indian precious stones most of which have been noticed in the previous chapter. Not without reason did Pliny give the epithet, 'gem-bearing' to India and her rivers.

Costus from India was used by the Romans in unguents and perfumes, in medicines, in seasoning of food and wine and in sacrifices. Indigo was valued by the Romans for colouring and for medicine. A similar product called 'lycium' provided a yellow dye, an astringent for the eyes, a face cosmetic, a dressing for sores and wounds, and a cure for diseases of the throat. The gum or resin called 'Indian copal' was used by the Romans mainly for making varnishes and the bark called "macair" as a specific for dysentery.

As we have already noticed in the previous chapter, the accession of Augustus gave an impetus to the trade between India (especially South India) and Rome which reached the climax about the time of

---

[1] *Pattinappalāi*, *ll.* 185 seqq.

[2] Pliny, XXIV, 17.

[3] Ptolemy, VII, 1, 20.

Nero who died in A. D. 68. Thenceforward, due to the ban on imports placed by the Roman Senate, the trade with India declined till the death of Caracalla (A. D. 217), after which it almost ceased. It revived slightly under the Byzantine emperors.

The largest number of coins of the early Roman emperors (Augustus to Nero) has been found in the vicinity of the South Indian beryl mines which produced the best and purest quality in the world. Most of the articles of luxury mentioned by the Roman writers came from Tamil Nād, occasioning the find of huge quantities of Roman coins in and near the Coimbatore district and at Madura.

612 gold coins and 1187 silver pieces have been catalogued. In addition to these listed coins many hoards have been discovered. The gold finds are described as "quantity amounting to five cooly-loads," and the finds of silver coins are severally described as (1) "a great many in a pot", (2) "about 500 in an earthen pot", (3) "a find of 963", (4) "some thousands enough to fill five or six Madras measures", (5) "some", (6) "a pot full of coins." These coins were the products of fifty-five separate discoveries mostly of the Coimbatore and Madura districts.[1] Besides these published accounts, there is a large number of collections, big and small, of Roman coins in the hands of individuals which they possess as personal wealth.

An analysis of the coins available gives us coins of all the emperors from Augustus (died 14 B. C.) to Alexander Severus (222-235 A. D.), a period of two and a half centuries. Then there is a gap of over one hundred years which suggests a temporary abeyance of trade between Rome and South India. This was due to internal revolts and external attacks suffered by the Roman empire during that period. When order and good government were restored in Rome, trade with South India seems to have revived. Hereafter the list is not quite continuous. However, Zeno's coins carry us to almost the end of the Roman empire.[2] Trade with the west revived under the Byzantine emperors and some coins of the Eastern Roman emperors of the fourth, fifth and sixth centuries A. D. have been discovered in the southern, western and eastern parts of India ; for the Byzantine empire had trade relations mostly with those parts. Aided by these shining little gold any silver coins of Rome and Byzantium, we can follow the commercial relationship between the Roman empire and India from the time of Augustus, a little before the commencement of the Christian era, to the sixth century A. D. In his *Digest*, Justinian

---

[1] *J. R. A. S.*, 1904, pp. 596-97.

[2] Ibid., 1904, pp. 608-609.

(483-565 A. D.) gives a list of articles imported from India—Indian hair, steel, perfume, pearls, jacinth, diamond, sapphire, turquoise, beryl, eunuchs, leopards, cinnamon, ginger, betel, cardamom and ivory.

The Chinese historian Pan-ku (1st century A. D.) mentions Kānchi (Huang-che) visited by Chinese merchants for buying pearls, glass, rare stones and the like in exchange for gold and silk. As early as the second century B. C. trade relations existed between East India and China by way of Upper Burma and Yunnan. Regular supplies of Chinese raw silk and silk yarn reached the Tamil cities which became centres of silk industry during this period. "The rise of the Greek kingdom of Bactria, and still more the function of the Kushāna empire, combined with the persistent efforts of the Chinese from the second century B. C. onward to extend their political influence westwards across the Tarim basin, led to the growth of conditions favourable to Indian trade with Central Asia and beyond."[1] In the early centuries of the Christian era, North-Western India was connected with China by two trade routes. Starting from the North-West frontier, a road ran by way of Kapisa and Bāmiyān across the Hindukush to Bactria where it joined the great silk-routes from China to the West. A shorter and more difficult route started at Gilgit in Kashmīr and passing through Yasin reached Kāshgar. From there it went to China. Silk yarn appears to have come to India from China. Linens with figures came from Babylon and Alexandria.

India seems to have imported many articles from foreign countries in return for her own products exported. Coral from the Western Mediterranean was much in demand in India for being exported to Europe. Roman ladies are reported to have cherished the beautiful red coral as much as they valued superior pearls. Pearls of inferior quality were brought from the Persian Gulf to Barygaza and of superior quality from Ceylon. Other articles imported were purple dye from the Persian Gulf, tortoise shell brought from Chryse to the ports of Tamil Nād to be re-exported to the West. Tortoise-shells imported from India were used by the Romans especially for decorating bedsteads made of ivory. Part of the purple dye probably came from Tyre, which produced the best variety in Asia.[2] Large quantities of dates were imported from the Persian Gulf area. Italian, Laodicæan and Arabian wines were imported.

The Tamil poem *Puranānūru* records that foreign wines imported in bottles of Yavana make were served to the kings in golden goblets by

---

[1] *A Comprehensive History of India* (Calcutta, 1957), Vol. II, p. 449.

[2] Pliny, IX, 60.

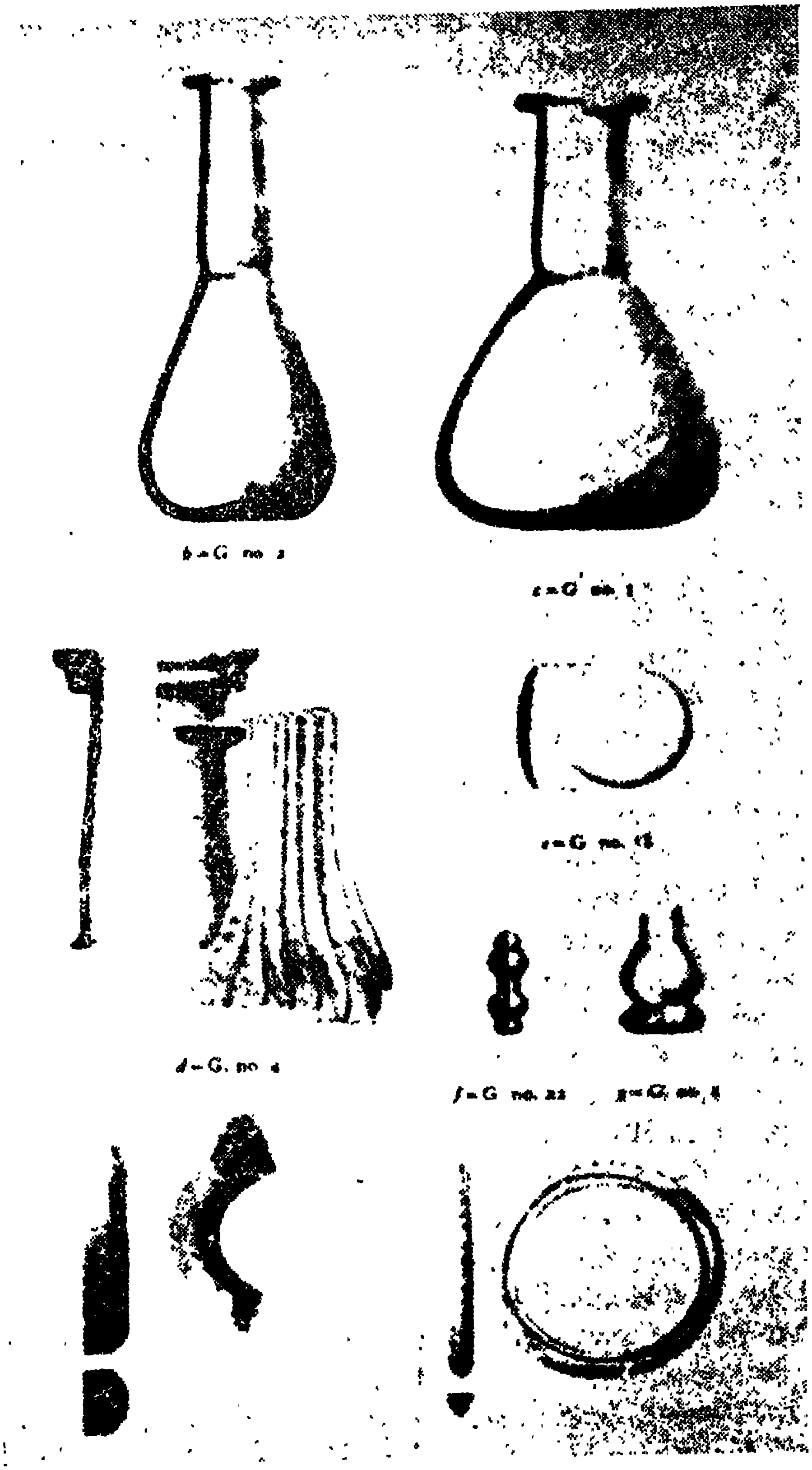

PLATE XXI

Some of the glassware of this period

bright-looking young women.[1] From the Roman empire came good looking virgins for kings' *harems* and singing boys. *Yavani* attendants on kings are regularly referred to in the literature of the period. Female slaves belonging to several foreign countries—Pahlava, Yavana, Munda, etc., are mentioned in some Jaina texts of the period. According to Strabo,[2] Italian wine produced in Campania was the most highly prized, while the Laodicæan (Syrian) wine supplied the needs of the people of Alexandria. Arabian wine was mostly date wine from the Gulf area. Among other things imported we may mention storax, frankincense, sweet clover and black aloe. Manufactured articles imported included embroidered linens, glass vessels, glass and crude glass. As regards minerals and metals, realgar, orpiment, antimony, copper, tin, and lead came to India from outside. Realgar and orpiment were principally used as mineral paints ; antimony was made into ointments and eye-tinctures. Topaz came from the Red Sea and ivory and emerald from Ethiopia.

Money-Lending

Vyāsa allows 1¼% for loans with security, 1⅔% for loans with surety and 2% per month for loans without either security or surety. According to Kātyāyana, the stipulated interest in excess of the legal rate must be paid, even if it had been promised at a time of distress. The same authority holds that friendly loans, if not returned on demand, bear interest at 5% per month. The same rate of interest is to be charged if the purchase money is not paid on demand.

Coinage

As we have already seen in the previous chapter, the earliest coinage of India appeared under the Persians who conquered and dominated the North-West of India for two centuries from about 500 B. C. to the advent of the Greeks in 330 B. C. The Mauryas borrowed the idea of coinage and also the standard of weight from the Persians but succeeded in producing only silver and copper punch-marked coins.

After the death of Alexander the Great, his generals established kingdoms in and around India. About 190 B. C. considerable portions of the North-West border regions of India were conquered by the ruler of Bactria. Since then we get coins issued by the Bactrian rulers which can be called semi-Indian due to the resemblance with the Taxila issue. Later the Bactrian governors of the Indian territory revolted and established an independent territory. The most famous of the Indo-Bac-

---

[1] *Puranānūru*, 56, *ll.* 18-20.

[2] Strabo, VI, 13 ; XVI, 2. 9.

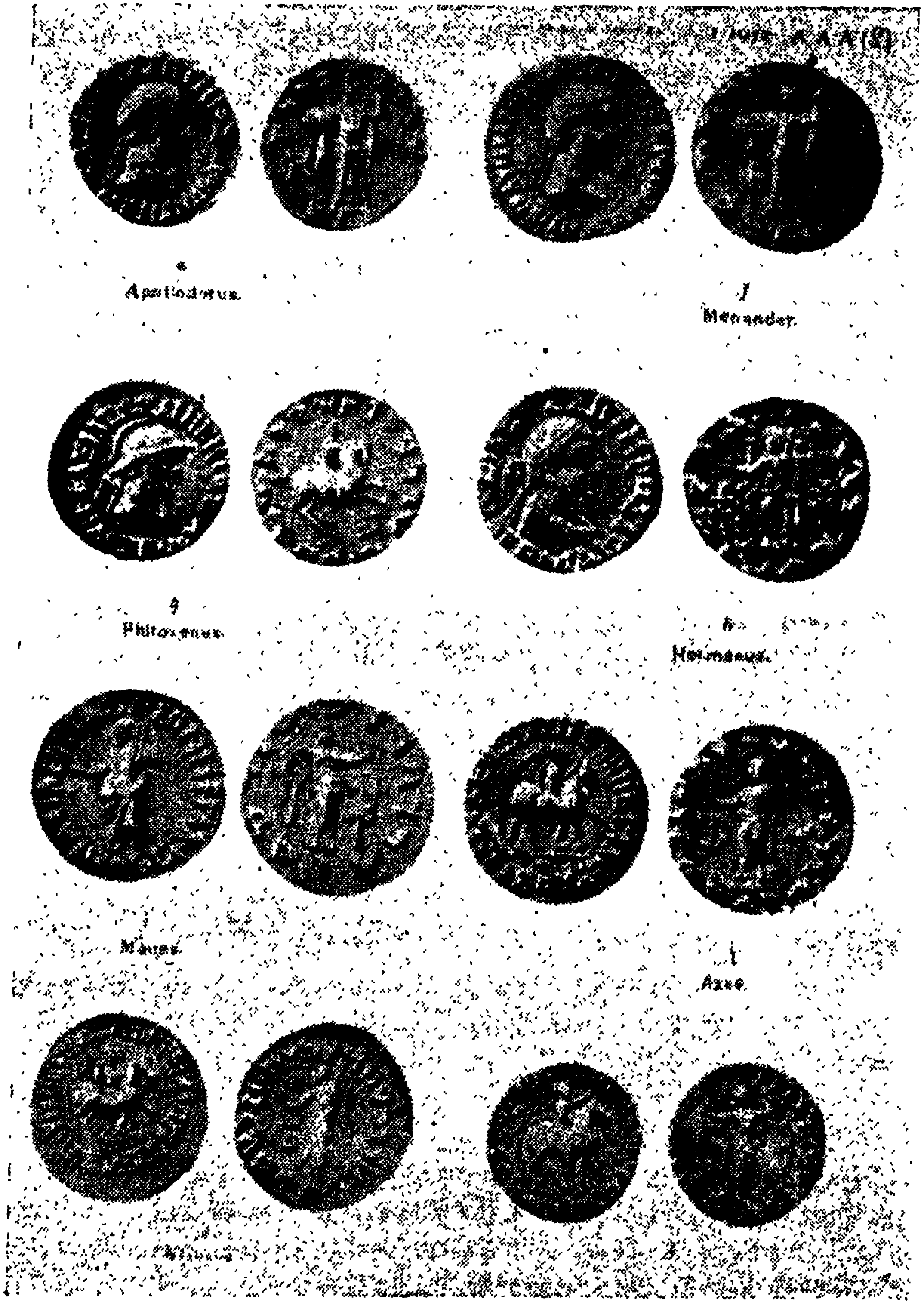

PLATE XXII

Coins of Bactria and North-Western India
(Cambridge History of India, Vol. I, Plate XXX)

trian rulers was Menander, who reigned from 160 to 140 B. C. His well executed coinage was issued in large quantities. Numerous other Greek princes ruled locally at various points on the Indian frontier, and specimens of their coinage have been recovered. The last of them was subjugated by Kajulakāra, the Kushāna chief, in the year 26 B. C.

The flourishing period of Indo-Scythian rule lasted for about three centuries—from 26 B. C. down to the end of the third century A. D., when it came into contact with the rapidly growing power of the Gupta dynasty of North India. For the Indo-Scythian period we possess a profusion of coins and inscriptions. The coins are numerous but of uncertain dates. During the first century of the Christian era Roman gold was brought to India in great quantities. In South India the Roman gold remained current and is still found there now and then. In the North most of it was received by the Kushāna Indo-Scythians. The weight of some of the Kushāna coins was compared by Cunningham with that of the Roman coins. He has come to the conclusion that the Kushāna pieces were re-struck on the Roman *aurei* of the first century. We see the Roman and Persian influence on some coins ; but many of the Kushāna Indo-Scythian coins were imitations of the Greek ones.

The Kushānas adopted Sabeanism of the Bactrians with a strange mixture of Indian gods. The Saka coins indicate worship of the Scythian Herakles. While there are no monograms on the Kushāna money, the Saka coins have a large number of monograms both in Greek and Arian characters. The Kushāna coins are mostly of gold ; for a large quantity of that precious metal was available from Rome. During the Saka period, commerce with Rome declined and hence the Saka coins are mainly of silver. The Indo-Scythian coins, like the Persian, Greek and Bactrian ones, were minted well and their execution displays great artistic skill.

The earliest Āndhra coins to which a date can be assigned belong to about 150 B. C. Most of the Āndhra coins are either billion or potin (a mixture of silver and copper in varying proportion). One issue, in lead, of Vasishthiputra Sri Pulumāvi (about 130 A. D.) is interesting in that it has on the obverse a ship with two masts, and was evidently intended for circulation on the Coromandel coast. The Āndhra lead coinage was copied by one or two feudatory chiefs in Mysore and North Kanara.

The coinage of the Indo-Greek kings made a deep impression upon their successors and neighbours. The Western Satraps, certain Āndhra kings and others copied the Indo-Greek models. When the Guptas

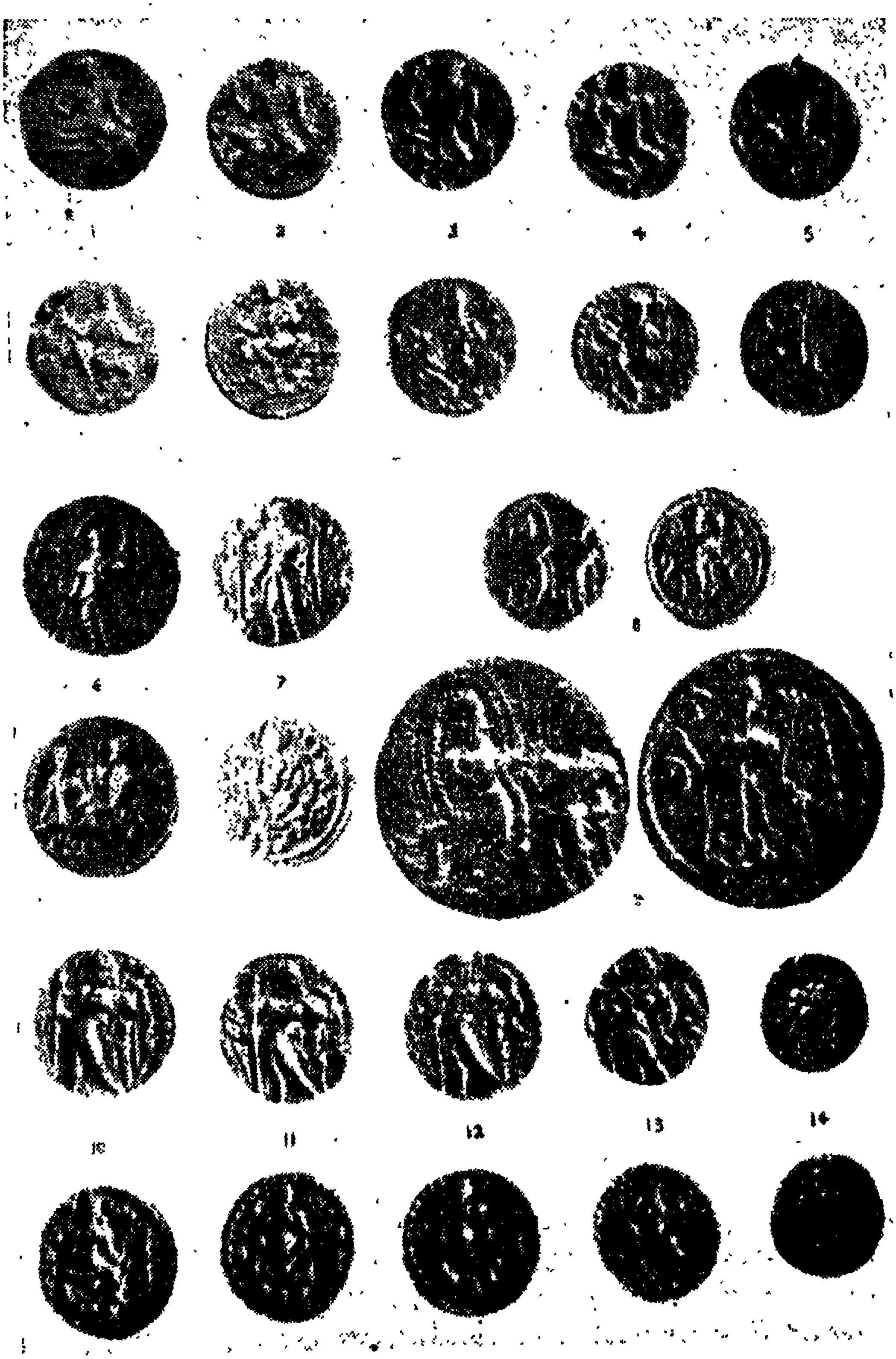

Plate XXIII

Some of the Gupta Coins

conquered the territories of the Western Satraps, they, in their turn, struck silver of the same type and carried the same to their central dominions. They were adopted by several minor dynasties including the Maukharis, and were even struck by the invading Hunas.

The states under Samudragupta's protection in the Punjāb were the districts of the old Kushāna empire in which the gold coinage current at that time was a degraded form of the Kushāna 'standing king' and 'seated goddess' type. It was from these coins that the earliest and commonest form of Samudragupta's issue was imitated. The earliest specimens, though much superior in workmanship, follow their model very closely. The rich plunder, which the conquests of Samudragupta brought, made a varied and plentiful gold currency possible during the later part of his reign.

Samudragupta struck only gold ; his successors issued silver too. The copper coins of the Guptas are few. It seems that they did not strike many ; for the bazaars were full of Kushāna copper coins. Since there has always been an insatiable demand for gold in India, seven other distinct varieties appeared during the reign of Samudragupta. The gold coinage of his son Chandragupta II is even more abundant than that of his father. Kumāragupta I (413-455) struck a few, now very rare, *Asvamedha* coins, but they are far inferior in execution to those of his father and grandfather. He also issued a few new types of gold coins. Of Skandagupta's gold pieces only two types are known. Skandagupta, who died in 480 A. D. was the last of the great Gupta rulers, and after his death the empire rapidly broke up and the quality of workmanship and the intrinsic value of the money sharply declined.

As many as sixteen hoards of Gupta coins have been discovered. According to Cunningham, the earlier Gupta issues follow the Kushāna standard of 123 grains and contain 107 grains of pure gold. But towards the end of Skandagupta's reign some of the coins become as heavy as 146 grains with only 70 grains of gold. Some coins of Narasinghagupta and Kumāragupta II contain as little as 54 grains of pure gold. A large number of silver and copper coins issued by the Gupta rulers is also available. We learn from the Baigrām copper plate[1] that one gold piece was equal to 16 silver coins. But the weights of the two coins are not given. Coins of gold and silver from any land were accepted and their value determined by weight and the degree of purity of the metal.

The imperial Gupta gold and silver coinage is marked by refinement and represents a high-water mark of early Indian art. It has artistic merit, variety and originality. "Not only do we have a multiplicity of types, but each type shows a surprising number of varieties."[1] With the weakening of the imperial authority and the rise of the feudal forces, the Gupta and cognate coinage shows a downward grade in intrinsic value as well as artistic merit so that towards the end of the Gupta period "it reached a bottom from which recovery seemed wellnigh impossible."[2]

---

[1] *Epigraphia Indica*, XXI, 81-82.

Conclusion

Since the documents dealing with land grants are found all over India, it proves that the elements of feudalism sprang up simultaneously in all the advanced parts of India, although in some parts they were not so pronounced and distinct as in others. Pre-feudal production-relations continued in backward regions and among the tribes living near the north-west and north-east frontiers of India.

The germs of feudalism are noticed as early as the time of the Magadha rulers, and feudal elements, in their bold relief, are observed under the Mauryas and the Guptas. Still we cannot say that a fully developed feudal order had emerged out with all its characteristics. We have to wait for a few more centuries to have a fully evolved feudal society that we see in the Europe of the 10th century A. D.

As we have already noticed, the transition from a primitive communistic society to a property-ridden society was marked by a series of bloody wars of various dimensions. Once private property was established and possession and enjoyment of any quantity of land and other forms of riches declared lawful, there was a mad scramble for wealth. Wars, murders by violence and poison, and all possible forms of misdeeds were let loose. Dynasties fell and new ones rose ; kingdoms perished yielding place to fresh ones, until at last the major portion of lands or the income therefrom passed into a few hands. A series of wars between Kosala and Magadha and between these kingdoms and others are reported. Ajātasatru killed his own father and succeeded him. Certain Buddhist reports state that in the kingdom of Magadha, until the conversion of Asoka, every ruler came to the throne by killing his father. The transfer of power from the Magadhas to the Mauryas is screened up by a dark drapery behind which we can infer, from slight hints we get, that there raged a nefarious struggle for power and pelf. Kautilya is reported to have put the last Nanda ruler to death and brought about the accession of Chandragupta, the Maurya.

---

[1] A. S. Altekar, *The Coinage of the Gupta Empire* (Benares, 1959), p. 13.

[2] Dr. Nihār Ranjan Roy in the *History and Culture of the Indian People*, III, p. 554.

The whole of the Mauryan history, except for a part of Asoka's reign, was one long story of war (fratricidal and inter-state) and bloodshed. Asoka himself is reported to have killed a large number of his brothers. The last Mauryan ruler, Brihadratha, was slain by Pushyamitra in 184 B. C., and the latter established the Sunga dynasty. The Sunga kingdom was invaded by the Yavanas (Greeks) and the Āndhras and succumbed to the latter who held sway in Central and Southern India and whose rule lasted until the middle of the third century A. D. In the meantime the Punjāb passed successively into the hands of the Greeks (from Bactria) and the Parthians. Then came the turn of the Kushānas and Sakas, a people from the region of China who pressed southwards and succeeded in conquering a substantial part of North India. The Guptas overthrew the Sakas about 390 A. D.

Thus, up to the establishment of the Gupta rule on a firm basis North India should have been drenched in blood, and it is by a further process of killing men on a large scale that the Guptas extended their empire. The feudal elements which we have observed in the foregoing pages grew watered by the blood of millions of human souls to suck the blood and sap the energies of the men who had survived the less cruel outright slaughters.

The growth of feudal elements was gradually ushering in a new type of production-relation in land. More and more of lands came into the possession of the classes favoured by the king ousting a larger and larger number of free peasants from their holdings and reducing them in the first instance to the status of wage labourers and subsequently to the position of serfs. This gradual change was bringing about the extinction of slave labour on land, because very cheap serf labour was becoming available.

Moreover, as the feudal elements develop, we observe a decline in internal and foreign trade, a paucity of coins, a self-sufficient local economy, lack of security for person and property and a passion for war. Most of the feudal elements are observed by the end of the 5th century B. C. Still, feudalism in its complete form had not yet come about. We have to wait for a few more centuries to get a full picture.

CHAPTER VII

THE ACCOMPLISHMENT OF FEUDAL FORMATION

The germs of feudalism are noticed in the later stages of the emergence of private property and kingship, when the warrior class as well as the priestly order, standing in a special relation to the king began acquiring more and more of landed property. Feudal elements appear in bolder outlines during the period of consolidation of private property and continue to grow during the subsequent centuries. Between the 6th and 10th centuries A. D. we see the complete formation of the feudal system, with a hierarchy and subinfeudation and the peasants being progressively reduced to the position of serfs bound to the land without any right in it. Since the inscriptions making feudal grants, and literary testimony establishing such giving away of fiefs as well as archælogical and numismatic evidence testifying to the existence of feudal institutions are found all over India, we may take it for granted that feudalization was completed on a wide scale from Kashmīr to Tamil Nād about the same time when the process reached its culmination in Europe and several other parts of the World.

Feudal Grants

We have noticed in the previous chapter that grants were made to the Brāhmanas and sometimes to temples and other religious institutions, to the princes of the royal family, to maintain charitable institutions and to the warrior class as well as the officials. The same practice was continued with greater rights to the privileged classes.

To Priests and Temples

In the previous period most of the grants were in favour of the Brāhmanas (persons). Now, although we come across a large number of grants to the Brāhmanas, either individuals or groups, the trend appears to be to endow lands and villages more and more to religious institutions just as in Europe feudal grants were made in favour of the Church.

In the grant of Karkkarāja Suvarnavarsa of 821 A. D., the donor endows a Brāhmana with the village of Brāhmana-pallika and the recipient gains the right to keep for himself, without passing any portion to the state, all taxes and dues hitherto collected by the king.[1] Bhillama II

[1] *Epigraphia Indica*, XX, 77-85.

of Dēvagiri (c. 1000 A. D.) granted certain lands to 21 Brāhmanas.[1] Many such grants to individuals and groups can be cited.[2] Under the Chola ruler, Parāntaka I, Uttaramerūr was a Brāhmana village. The government of the village was entirely in the hands of the *sabha* of the Brāhmanas which decided disputes, granted lands to temples and schools attached to them, maintained a hospital, administered charitable endowments, controlled, assigned or remitted taxes.[3] Brāhmana donees in Tamil Nād were able to grant villages to others.[4]

King Ganapati of the Kākatīya dynasty endowed the village of Govatika to the temple in the city of Chembrolu[5] (or Tāmranagarī). Jaya or Jayana, an officer of the king, was assigned the entire income from the city of Chembrolu.[6] Jaya, as the lord of the city, managed the estates of the temple consisting of endowments old and new and also the affairs of the temple. He assigned pieces of land belonging to the temple to the various functionaries of the sacred institution,[7] repaired the holy structure, and prepared a list of the properties belonging to the temple. The queen Alhanadēvi, the widow of king Gayākarnadēva, founded a Siva temple with a cloister (*matha*), a hall of study and gardens attached to it. For their maintenance, she endowed two villages —Namundi in the Jauli *pattala* and Makarapataka on the right bank of the Narmadā.[8] King Simharāja granted (970 A. D.) the villages of Simhagoshtha in the Tunkupāra group of Twelve, Traikalakāka and Isānakūpa in the Pattabaddhaka *vishaya* and Kanhapallika in the Sarahakotta *vishaya* to a temple. His brother Vatsarāja gifted the village of Kardamakhata, King Vigraharāja the villages of Chhattradhāra and Samkaranaka ; Simharāja's other sons Chandrarāja and Govindrāja granted two hamlets in the Pattabaddhaka and Darbhakaksha *vishayas*. Dhandhuka, an official of Simharāja, endowed to the same temple the village of Mayūrapadra in the Kattakūpa *vishaya* and a certain Jayanarāja the village of Kolikupāra.[9] We have evidence of many such endowments to temples during the period.

Charity Endowments

One Govindarāja, a feudatory of the Yādava king, founded a *sattra* or hall of charity for the travellers, the learned and the indigent. A temple of Siva was attached to the *sattra*. For the maintenance of the *sattra* and the temple, he gifted four fields.[1] The copper plate inscriptions from Gāonri record that Govinda III of the Rāshtrkūta dynasty of Malkhēd granted in 930 A. D. the village of Payalipaltana to run a *sattra* or a charitable feeding house, where a thousand Brāhmanas belonging to different denominations were to be fed.[2]

---

[1] *Epigraphia Indica*, II, 215.

[2] For example, *Epigraphia Indica*, III, 54 ; IV, 13 ; XXVII, 176-182, etc.

[3] Nīlakanta Sāstri, *The Cholas* II, Part I, pp 277 seq.

[4] *Epigraphia Indica*, XVII, 298 seq.

[5] Ibid., V, 151.

[6] Ibid., V, 142 seq.

[7] Ibid., V, 150.

[8] Ibid., II, 8.

[9] Ibid., II, pp. 118-119.

Grant to Princes

The Eastern Chālukya king Ammarāja I Vishnuvardhāna granted the village of Drujjuru to Mahākala, a general of the army and son of a foster sister of Ammarāja's grandfather, Bhīma I.[3] The Ganga king Vajrahasta granted the village of Hossanadi to his son-in-law, Kamandi of "renown which he has gained by his victories in many battles."[4]

Kings and emperors of this period granted big tracts of land to their nearest relatives to be ruled by them and inherited by their descendants. For instance, we learn that Dhurva, the brother of the Rāshtrakūta ruler, Govinda II, who was ruling over a large part of the empire, revolted against his overlord (elder brother) and seized the throne.[5] Govinda III (793-814 A. D.) of the same dynasty made one of his brothers, Stamba, his viceroy in th Gangawādi (Mysore) region and another brother, Indra, was made the viceroy of Gujarāt and Mālwa. These brothers of the emperor had their own armies, and in the case of Indra, we find his possessions being inherited by his descendants, who succeeded later in establishing the independent Rāshtrakūta kingdom of Gujarāt.

We have seen just now that Simharāja, his brother, and three sons granted villages to a temple. They could have made such grants only if they were in possession of those villages or enjoyed the revenues from them. There is absolutely no room for doubt that the princes of the royal family and in many cases queens and princesses were assigned estates. In the case of the princes, these estates were to be held as feudal fiefs and in the case of the ladies of the royal family, as assignments for their maintenance or personal expenses.

Grants to Military Chiefs

The Eastern Chālukya king Ammarāja I gave a grant to one of his military officers on the occasion of the infant prince taking solid food. The recorder of the grant makes it clear that all the four grants given by Amma I up to that time were given to military captains. In this inscription the donee is referred to as the grandson of a Rāshtrakūta of the same village, the family having distinguished for three generations by special military service to the king and by exceptional devotion. The recipient, Vemarāja, is made the *grāmani* of the village. He is to pay only the tribute of 8 *gadyānakas*. The revenue he is entitled to collect from the village is stated as the yield of a particular crop. In this case 8 *gadyānakas* cash fee is explicit and military service implied. This should have been the case with all grants to military men. We learn about a hereditary (*maula*) army which was the main source of strength for the king in his wars. Dr. Kane thinks that "they most probably consisted of persons, who and whose ancestors got tax-free lands in lieu of military service."[1]

---

[1] *Epigraphia Indica*, II, p. 224.

[2] Ibid., XXIII, p. 104.

[3] Ibid., V, 131.

[4] Ibid., III, 221.

[5] Ibid., III, 105.

King Ganapati of the Kākatīya dynasty granted the city of Chembrolu (called Támrapura or Tāmranagarī in Sanskrit) to one Jaya or Jayana, the chief of the elephant troop. The entire income from the town was assigned to him. He, as the lord of the city, had the temple repaired, made proper arrangements for its functioning, out of its own property, to which king Ganapati himself added one more village named Govatika. Jaya also had a wall erected around the city of Chembrolu.[2] The Chola king, Parāntaka I, made an extensive land grant to the general who shattered the interventionist attempt of the king of Ceylon, Parākramabāhu, on behalf of the Pāndya king Rājasimha. The grantee defeated the combined forces of the Pāndya and Lanka kings in a great battle fought near Vēlūr (not yet identified).

All the grants made to the male members of the royal family were military grants and many more grants to military officers can be cited. K. A. Antonova has noticed[3] two more grants made to military officers. The Ganjam copper plates of Vajrahasta III of the Ganga dynasty (1068 A.D.) record the grant of a village Navagrāma in the district of Varāhavastani by king Vajrahasta to Gokanāyaka, son of Bhīmananāyaka in recognition of the donee's devotion and valour extending over a long period.[4] The *rānaka* Rāmadēva, a vassal of the Chālukya ruler, granted a village called Upalabada to one Revananāyaka. The donee was a military officer under the *rānaka* and received the gift as a reward for some heroic deed on his part.[5]

---

[1] P. V. Kane, *History of Dharmasāstras* in 5 volumes, Bhandarkar Oriental Research Institute, Poona, Vol. III, p. 200.

[2] *Epigraphia Indica*, V, pp. 142 seqq.

[3] *K Voprosu O Rasvitii Feodalizma V Indii* in the AK-Nauk USSR Krakie soobschenia instituta vostokovedeniya, III, (Moskva, 1952), pp. 23-32.

[4] *Epigraphia Indica* Vol. XXIII, p. 69.

[5] Ibid., p. 142.

Apart from these grants and vassalage through receiving estates from the king and holding it of him, a large number of independent kings and chieftains were subdued by powerful emperors like Samudragupta, Chandragupta II, the Rāshtrakūtas, the Chālukyas, the Pālas, the Cholas, and others. Many of the smaller kings and chieftains submitted to the conquerors and agreed to be their vassals. It meant payment of a certain annual tribute (cash fee) and rendering military service when called upon to do so.

The military obligation of these subdued chiefs and that of military commanders who were made feudal chiefs by the conquering rulers is clearly established by a large number of reports. *Senāpati* Bhatāraka, a general of the Gupta emperor, was granted the province of Kathiawār to be ruled by him and inherited by his successors (in lieu of military service). The grant by Simhāditya[1] dated A. D. 574 mentions that a commander (*senāpati*) named Varāhadāsa I of the Garulaka family was a feudatory of the Valabhī ruler. We get details about the military help rendered by the feudal lords to the imperial Guptas against their enemies, especially in the great war against the Kshatrapas of Western India. An inscription[2] at Pratābgarh in Southern Rājputāna refers to a local Chāhamāna dynasty which helped their overlord Mihra Bhoja (Pratihāra) in his wars against the Rāshtrakūtas about 888 A. D. The Rāshtrakūta nobles were all military men who fought for their suzerain. The Aihole inscription (634 A. D.) describes Harsha as equipped with the hosts supplied by his *sāmantas*. The Dāmaras of Kashmīr were armed nobles with their own armies and fortified strongholds, and it was with the help of these armies furnished by his feudal vassals that king Lalitāditya (724-790 A. D.) of Kashmīr was able to build up an empire comprising Kashmīr, Kathiawār, Bengal, Kalinga and the territories which had been under the kingdom of Kanauj and other intervening dominions.

The rapid growth of the Gupta empire did not leave much time for centralization. In many cases former rulers were left in charge of their territories to be held of the emperor on two conditions—payment of a fixed tribute (cash fee) and rendering military service with a contingent, big or small, according to the size of the territory. The subordinate ruler was called a *sāmanta*. Harishena's long eulogy of Samudragupta, engraved on the Asoka Pillar at Allāhābād,[3] gives seven kingdoms as those of feudatories on the borders of the empire of Samudragupta ; viz., Samatata (South East Bengal), Kāmarūpa (Upper Assam), Nepāla (Nepal), Davaka

---

[1] *Epigraphia Indica*, XI, 17.

[2] Ibid., XIV, 176.

[3] Fleet, Vol. III, 1.

(Nowgong district in Assam), the Saka kingdom of Western India and the Kushāna kingdom of Western Punjāb and Afghānistān. These kingdoms might have entered into treaty relations with Samudragupta and even made some presents to the formidable conqueror who might have claimed the presents to be tributes. The rulers of the above-mentioned kingdoms cannot be considered vassals of Samudragupta.

The same document mentions twenty-one rulers who were defeated, captured and then set free to rule as the vassals of the Gupta emperor, namely, the Mālvas of Eastern Rājputāna, the Yaudheyas of Johiyabar along both the banks of the Satlej on the borders of the Bhāwalpur state, the Madrakas occupying the territory between the Rāvi and Chināb, the Ārjunayānas, who probably ruled over the territory of Jaipur, the Sanakānikas of Bhīlsa, the Abheras of Jhānsi, the Prajunas, the Kakkas, the Kharaparikas (all the three ruling over territories in the Madhya Pradesh), Mahendra of Kosala (Drūg, Rāipur, Bilaspur and Sambal districts). Vyāghrarāja of Mahākantara (Jaypore state, Orissa). Mahendragiri of Pishtāpura (Pithāpuram) in Godāvari district, Hastivarman of Vangi (Pedda-Vengi), Ugrasena of Palakka (Nellore district), Vishnugopa, the Pallava king of Kānchi (Kānchipuram) in Chingleput district, Damana of Erandapalla in the Vizāgapatam district and Kuvera of Dēvarāshtra in the same district, Mantarāja of Kaurala (not identified) Swāmidatta of Koltura in Kalinga, Nīlarāja of Avamukta and Dhananjaya of Kustalapura (possibly the last mentioned two rulers had their kingdoms in Kalinga). The feudatories of Chandragupta II were Mahārāja Trikamāla, Swāmidāsa of Central India and Mahārāja Visvāmitrasvāmi and also Mahārāja Sanakānika. The imperial Pratihāras had feudatories like the Kachchapaghātas of Gwālior, the Chandelas of Jejakabhukti, the Haihayas of Danhala, the Paramāras of Mālwa and others. Harjaravarman of Assam had under him Suchitta as his *mahāsāmanta*,[1] Sasānka was a *mahāsāmanta* of Rohtāsgarh.[2] Later in 619, Mahārāja Sri Mādhavarāja II of Kongola was a *mahāsāmanta* of Sasānka. The pre-Pāla rulers of Bengal like Samāchāradēva, Dēvakhadga and Jayanāga had *sāmantas* under them.[3] In Orissa, the Bhaumakāras and the Somavamsi kings had feudatories. Harshavardhāna had a large number of *sāmantas*. The Rāshtrakūtas had feudatories like Karkka and his successors ruling over Southern Gujarāt, the Rattas of Saundatti, the Silāhāras of Thana and the Paramāras of Mālwa.

---

[1] A List of Inscriptions of Northern India By D. R. Bhandarkar (Appendix to *Epigraphia Indica* XIX—XXIII, No. 1376).

[2] Ibid., No. 1741.

[3] *History of Bengal*, Vol. I, p. 274.

The subdued rulers became the feudal barons of the conquerors. They had to pay tribute and also render military service when called upon to do so. Although they did not originally receive their territory from the emperor or king as a fief to be held of him, the fact, that they were subdued, made to pay a cash fee and rendered liable to military service to the overlord, converted them into *de facto* vassals of the conqueror. Their estates became fiefs as if they were originally granted by a feudal superior.

The Formation of a Feudal Hierarchy

The grants to the priestly class, the royal princes and military and civil officers constitute the chief economic essence of feudalism, that is, the appropriation of an enormous portion of land by the superior classes standing in a special relation to the king. Orthodox scholars, insist that a hierarchy is one of the essential features of feudalism. Naturally, whenever there is an essence, we are certain to find its peculiar properties, and whenever we are sure of the economic base we can expect the corresponding superstructure as well.

The Mahārājadhirāja (King)

As for the steps in the feudal hierarchy of the period, there was the *mahārājadhirāja*, the sovereign king, at the top who was the sole owner of the entire land. All others held it of him. Besides, he himself had an enormous royal *demesne* under his direct possession. He issued coins in his own name, held court, and as the very spring of justice, dispensed justice in person or through his deputies., He granted villages from the area which had not yet been assigned as a fief to any one, that is, from the fiscal land, or out of the fiefs of his feudal subordinates. For instance, Mahendrapāla II granted a village in the holding of a certain *talavargika* in the year 946 A. D. The king was the supreme commander of all his military forces and those of his feudal subordinates.

When Samudragupta subdued a large number of independent rulers and allowed them to hold their former territories of him (as fiefs granted by him), they all became the *sāmantas* or vassals of the emperor. The word *sāmanta* occurs in a very large number of inscriptions in the sense of a feudal lord owning allegiance to the king. The first epigraphic mention of the term in the sense of a feudatory is found in the Barābar cave inscription of the Maukhari chief Anantavarman in which his father is described as *sāmanta chūdāmanih* (the best among the feudatories).[1] The date of Anantavarman's father may be put round about

---

[1] Fleet, Vol. III, p. 49.

A. D. 500 when the Maukharis were the *sāmantas* of the imperial Guptas. According to the Aihole inscription, the feudatories of Harsha were known as *sāmantas.*[1] Further, we get several compound words with the word *sāmanta* as a part of it *sāmantadēva, sāmantamahārāja, mahāsāmantamahārāja, mahāsāmantādhipati, mahāsāmanta.*

2. The Mahāsāmantamahārāja and the Sāmantamahārājā

The highest category of nobles after the paramount sovereign appears to have been that of the princes of the royal family or semi-independent rulers. The first two chiefs of Valabhī, Bhatāraka and his son Dharasena, called themselves *senāpati* (commander), but their successors styled themselves as *mahārāja* or *sāmantamahārāja.*[2] In a Cuttack inscription of the Somavamsi kings, the younger brother of the king is referred to as *mahāsāmantamahārāja.*[3] These two cases are of royal princes, younger brothers of the ruling princes. Further, we learn that Varāhadāsa I's two sons (Bhattisūra and and Varāhadāsa II) and his grandson were called *sāmantamahārājas.* The grant which gives this detail was issued by Simhāditya in A. D. 574.[4] In these cases, in which the title was held by royal princes, the term *sāmantamahārāja* may be taken to denote the highest nobles of the kingdom. A like status may be assigned to the rulers of Ohind one of whom, early in the 10th century, calls himself *sri sāmanta dēva* in the legend of his coin.[5]

3. The Mahāsāmantdhiāpati

Next in rank, after the *mahāsāmantamahārāja,* was the noble called *mahāsāmantādhipati.* Where there was no *mahāsāmantamahārāja,* the latter was the chief noble of the kingdom. We come across the term *mahāsāmantādhipati* to connote the greatest or at least one of the greatest nobles of the kingdom in many documents. A Siyādoni inscription of the 10th century describes one Undabhata as a *mahāsāmantādhipati.* The same inscription speaks of another person as *mahāsāmantādhipati* Nirbhayanarendra. Two other inscriptions at Terahi, a village twenty-seven miles north-west of Siyādoni also refer to Undabhata as *mahāsāmantādhipati.*[6] A grant of the time of Mahendrapāla dated 617 A. D. mentions the *mahāsāmantādhipati* Dharanivarāha.[7] A record of Devagiri in the Karaigi taluq Dharwār district referable to 958 mentions a *mahāsāmantādhipati* Sāntivarman of the Mātura family with the hereditary title of "supreme lord of the town of Trikundapura".[1] Several Ablūr inscriptions mention Anantapāla, a high minister of the Western Chālukya king Virkamāditya VI as a *mahāsāmantādhipati.* One of the Silāhāra chiefs, Aparājitadēvea, who was a hereditary vassal of the Rīshtrakūtas, was called *mahāsāmantādhipati mahāmandalēsvara.*[2] The Kelawādi inscription of Somēsvara I mentions one *dandanāyaka* Bhogadēvarāja as a *mahāsāmantādhipati.*[3] There are many other inscriptions of this period which have this term used to indicate the highest feudal noble of the kingdom after the king.[4]

---

[1] Aihole inscription dated 634 A.D.

[2] *The History and Culture of the Indian People,* Vol. III, p. 61.

[3] *Epigraphia Indica,* Vol. III, p. 305 [4] Ibid., XI, 17.

[5] V. A. Smith, *Catalogue of the Coins of the Indian Museum,* Vol. I, p. 257.

[6] *Epigraphia ndica,* I, 168 seqq. [7] Ibid., IX, 4.

4. The Sāmanta and the Mahāsāmanta

From the 6th century onwards we come across the word *sāmanta.* At a later period the term *sāmanta* was probably found too small for big fief holders and the term *mahāsāmanta* was coined. A feudal lord of the Pāndya king Jatila Parāntaka (c. 765-815) was called *mahāsāmanta.*[5] A noble who called himself a simple *sāmanta* in the 5th or 6th century might have been a greater noble than the one designated a *mahāsāmanta* at a later period. But at the same period, say in the 10th century, a *mahāsamanta* was a greater noble than the ordinary *sāmanta.* In 990-91 A. D. one *mahāsāmanta* Nāgāditya makes a grant during the reign of his Chālukya sovereign Jayasimha II.[6] The Sītābaldī inscription of Vikramāditya IV of the Western Chālukya dynasty mentions the *mahāsāmanta* Dhādibhamdaka[7] as a vassal of the king. In addition to these few illustrations there are a very large number of inscriptions containing the terms *sāmanta*[8] and *mahāsāmanta*[9] to denote feudal vassals of a king. As centuries roll by, the distinction between the *sāmanta* and the *mahāsāmanta* becomes less distinct and we hear of more and more *mahāsāmantas* and fewer and fewer *sāmantas.* There is an interesting case which demonstrates how the position of a *mahāsamanta* became next higher to that of a *rānaka.* A vassal of Vikramāditya IV is mentioned as the *mahāsāmanta* Dhādibhamdaka also called the *rānaka* Dhīdiadēva. This case shows that the officer was formerly a *rānaka* and was subsequently promoted to be a *mahāsāmanta* without ever tarrying at the stage of a *sāmanta*.

---

[1] *Epigraphia Indica,* V, p. 172.

[2] Ibid., III, p. 269.

[3] Ibid., IV, 279 and 262.

[4] For example, *Epigraphia Indica,* III, 269 ; IV, 245, 254, 260 ; V, 172., 215 seq., 230 seq.

[5] Ibid., IV, pp. 245, 254.

[6] Ibid., III, p. 236. [7] Ibid., III, 305.

[8] For example, *Epigraphia Indica,* III, 54, 231, 305, 322 ; IV 309 ; V, 216 225, 229 ; VI, 135, 141, 191 ; IX, 1, 289 ; XXIII, 79, 126, 158, 186, 201, 263, 283, 291.

[9] Ibid., III, 209 ; IV, 244, 357 ; V, 36, VI, 71, 135, 155, 297.

The *mahāsāmantamahārājas*, the *sāmantamahārājas*, the *mahāsāmantādhipatis*, the *mahāsāmantas* and the *sāmantas* represented the higher category of the nobles of the kingdom. India is a vast country with a large number of kingdoms and independent principalities and the period of our study covers about half a millennium. It is not likely that in this extensive country with numerous languages feudal terms and their significances should be identical. Even the same designations could have different significances at various periods. Definitely, a *sāmanta* of the early Gupta empire or Harsha's empire could have been a much bigger magnate than a *mahāsāmantamahārāja* or *mahāsamantādhipati* of a small kingdom during a later period. In Kashmīr, the great nobles of the kingdom were called Dāmaras. The Gangas of Gangawādi (the modern Mysore area) were great vassals of the Rāshtrakūtas. Other terms equivalent to *sāmanta*, *mahāsāmanta* and *mahāsāmantādhipati* might have been provalent in certain regions of the vast country. We have seen above that Mahendrapāla II granted a village in the holding of a certain *talavargika*. The exact rank of that feudal magnate is not known. We often come across terms like *mandalika*,[1] *mandalēsvara*,[2] *mahāmandalēsvara*,[3] and *mahāmandalēsvarādhipati*.[4] A Silāhāra vassal (hereditary) of the Western Chālukyas named Rattarāja is mentioned as a *mandalika* in one of the inscriptions. Another Silāhāra chief, Aparājitadeva, who was a hereditary vassal of the Rāshtrakūtas, is called *mandalēsvara*.[5] He grants the village of Bhādāna in one of the records. There are several other cases in which the term is used. The term *mahāmandalēsvarādhipati* occurs in several records.[6]

These nobles were all military chiefs with their own armies and held great estates. The Dāmaras of Kashmīr not only had their private forces but also possesses fortified strongholds. They, like the English barons of the days of Stephen and Matilda, often indulged in civil wars, sometimes between the king and a section of the Dāmaras ; often they took sides with the aspirants to the throne in the wars of succession with a view to securing more lands and riches. They also utilised

[1] *Epigraphia Indica*, III, p 293.

[2] For example, *Epigraphia Indica*, III, 268.

[3] For example, *Epigraphia Indica*, VI, 83, 91, 147, 155, 224 ; VIII, 128, 204, 305 ; IX, 149, 165, 258, 265.

[4] For example, *Epigraphia Indica*, XXIII, 226, 271-73.

[5] *Epigraphia Indica*, III, 268.

[6] For example, *Epigraphia Indica*, XXIII, 226, 271-73.

opportunities to enrich themselves by plunder. Naturally, they did not like a strong ruler.[1] In the reign of Mahendrapala there was a fight between two *mahāsāmantas* and we get a reference to it in a memorial tablets (V.S. 960). A few of the nobles were so great that they could defy the king and sometimes overthrow him. Dhurva, the brother of the Rāshtrakūta ruler Krishna II, revolted against his overlord and ousted him out of power.

Some of these great nobles issued their own coins although coins during this period were very few. We have the coins of the Valabhī rulers, the Maukharis, the Rāshtrakūtas of Gujarāt, the Gangas of Gangawādi, the Yaudheyas, the Mālvas of Eastern Rājputāna, the Pavrajakas of Bāghelkhand region, which were issued during the period, when they were the *sāmantas* (vassals) of their overlords. The greater nobles held their own courts and dispensed justice, deciding civil and criminal cases and punishing the offenders and the rebellious. The grand nobles of the Rāshtrakūta empire modelled their courts and the mode of adminstration of the land under them after the courts and system of administration of their overlords. They assigned fiefs to their subordinates in their own names,[2] sometimes in the name of their sovereigns. In some cases kings issued grants on the recommendation of their great nobles. The Khālimpur plate of Dharmapāla Dēva records that the king, at the request of his *mahāsāmantādhipati*, Nārāyanavarman, granted four villages to a temple.[3] These were the chief nobles of the kingdom or empire and were, in some cases, closely related to the sovereign.

They held their great fiefs of the king and passed them on to their progeny. For instance, *senāpati* Bhatārka, a general of the Gupta emperor was appointed governor of the province of Kathiawār with Valabhī as its capital. The governorship became hereditary in the family (Dharasena, son of Bhatārka, succeeding his father) and the province was converted into a fief granted in perpetuity. Dharasena was succeeded by his brother, Dronasimha, who became so powerful that he was recongnised as a *mahārāja* by his suzerain. In the later Gupta period we find several feudal families ruling for generations. Jayavarman, Simhavarman, Naravarman (404 A. D.) and Visvavarman (423 A. D.) are known to have ruled at Dasapura one after another.[4] Similar was the case of the Maukharis who ruled over South Bihār and Eastern U. P. as feudatories of the Guptas. In the Rāshtrakūta kingdom Malladatta's family and the descendants of Bankeya inherited their ancestors' fiefs. Again, a commander (*senāpati*) Varāhadāsa I of Garulaka family was a feudal vassal of the Valabhī ruler. His two sons Bhattisūra and Varāhadāsa II, succeeded him one after another ; and the last mentioned magnate was followed by his son, Simhāditya who issued a grant[1] in 574 A. D. We have already noticed in the Devagiri record that Sāntivarman had the hereditary title of "Supreme lord of the town of Trikundapura."[2]

---

[1] *Rājataringini*, VIII. 1028.

[2] *Epigraphia Indica*, III, p. 268.

[3] Ibid., pp. 245, 254.

[4] B. P. Mazumdār ; *The Socio-Economic History of Northern India* (1030-1194), Calcutta, 1960, p. 8.

These nobles granted villages or plots of lands to the Brāhmanas, to temples, for charitable purposes, and as fiefs to their subordinate feudal officers. They not only endowed lands and villages but also assigned taxes and granted remissions at their sweet will. The grants to subordinate military men were made on the same two conditions on which the donor held his fief of his immediate superior, viz., the payment of a fixed cash amount (fee) and rendering military service when called upon to do so. Most of the *sāmantas* and *mahāsāmantas*, especially during the later centuries, appear to have been in the active service of their overlords. It is mostly through their grants that we know the names of the nobles and their holdings.

5. The Rānaka and the Gāvunda

In the records of the period covered by this chapter (6th to 10th century A. D.) we come across the term *rānaka*,[3] as a feudal vassal of a lower category. One Kīrtivarman, who made a grant in the Chedi year 925 is called a *mahārānaka* in that grant.[4] In the Tekkali plate issued by Satrubhanja of the family of Bhanjas, he is called *rānaka* (c. 842), The Talcher plate of Sivakaradēva (c 900) records a grant of land at the request of *rānaka* Sri Vinītatunga. Again the word *rānaka* in the sense of a feudal vassal is mentioned in the Bonai grant.[5] There is a case in which a grant was made at the instance of a *rānaka*.[6] There is another instance in which a grant was issued by a *rānaka* without any mention of the sovereign. These grants definitely establish that there was a class of feudal vassals who were known as the *rānakas*. There should have been a corresponding rank all over the country.

In one of the records we find that a county-gāvunda (*nāl-gāvunda*), in charge of two groups of 300 villages each, grants some lands to a temple. He expressly reserves for his own share a fixed revenue along with the king's share while making the grant.[7] From two inscriptions[1] we gather that the county-gāvunda, either singly or jointly with other *gāvundas*, could endow lands, transfer revenues, and grant remissions. In the Kanada tract the towns were ruled by *ūr-gāvundas.* These *nāl-gāvundas* and *ūr-gāvundas* may (possibly) be placed on the same rank with the *rānakas*. Smaller Dāmaras could have possessed only as much power and influence as those of a vassal occupying a place inferior to that of a tenant-in-chief.

---

[1] *Epigraphia Indica*, XI, 17.

[2] Ibid., V, p. 172.

[3] *Epigraphia Indica*, I, 305 ; II, 28 ; III, 222, 305, 350, 358 ; IV 255 ; V, 103 ; VI 136 ; VIII, 140, 205 ; IX, 73.

[4] Ibid., II, p. 298.

[5] J. B. O. R. S., VI, 236.

[6] *Epigraphia Indica*, XXXIII, 266.

[7] Ibid., II, p. 298.

As we have seen just above, the *rānakas* and the *gāvundas*, who happened to be the king's vassals, holding a secondary position in the feudal hierarchy, could issue land grants to their subordinates. On page 197 we have seen that a *rānaka* named Rāmadeva granted a village to his vassal (a *nāyaka*) as a reward for some heroic deed,[2] but we have not come across *rānakas* and *gāvundas* issuing coins in their own names.

The Thakkura, the Rāshtrakūta, the Nāyaka and the Bhogika

Still lower in the hierarchical ladder, there were certain categories of feudal gentlemen like the *thakkuras*[3] the *rāshtrakūtas*(in the general sense) *nāyakās*[4] and *bhogikas*.[5]

In the year Sam. 1532 Bāi Rūpīi, daughter of *thakkura* Narasing, who was the wife of the *mandalika*, and Bāi Māmī, daughter of especially in *thakkura* Gopāla, had an image and base for it erected.[6] The *thakkuras*, Kashmīr, are definitely known to be a category of fief holders bound to pay a small cash payment to the superior and serve in the latter's military contingent. We may assume that *thakkuras* all over India belonged to the same class of small fief holders bound to render military service.

The term *rāshtrakūtas* means a superior class of landowners above the *kutumbins*. In one of the records we find that the *mahārāja* Vishnuvardhāna issues the land grant by a proclamation to "all the *kutumbins* headed by the *rāshtrakūtas*", and the donee himself seems to be one of the *rāshtrakūtas*, a warrior in foster-relationship to the king.[7] In fact, all the other five Eastern Chālukya inscriptions published in the article of K. A. Antonova[8] contain the same phrase

---

[1] *Epigraphia Indica*, XII, 365 seq and XVI, 278 seqq.

[2] Ibid., XXIII, p. 69.

[3] For example, *Epigraphia Indica*, I, 189, 336 ; IV, 103, 106, 108 to 114, 118, 120, 122, 123, 125, 126, 128, 130, 135 ; V, 113, 117 ; VIII, 152.

[4] For example, *Epigraphia Indica*, I, 100, 111 ; VI, 135, 141, 144, 189, 286.

[5] *Epigraphia Indica*, II, p. 19, etc.

[6] Ibid., II, p. 27.

[7] *Epigraphia Indica*, V, 131.

[8] AK Nauk USSR Kratkie soobschenia instituta vostokovedeniya, III (Moskva, 1952), pp. 23-32.

rāshtrakūtapramukhan kutumbinas samahuya. So the *rāshtrakūtas* clearly formed a special higher class of land owners with the right and duty of bearing arms in the royal service. Since, a *rāshtrakūta,* in the general sense of the terms, was only just above the *kutumbin,* he could not have been a very big landholder, although in certain cases the term referred to very powerful nobles.

Further, we come across the terms *nāyaka*[1] and *mahānāyaka*[2] signifying feudal chiefs of a lower category. One Kēsava (who is called a *nāyaka*) of Mālwa, Brāhmana by birth, caused a temple of Īsvara to be built.[3]

According to Dr. Buhler, a *bhogika* was "a small man, not more than a *thakkur* of one or few villages ; for *bhogika* occurs frequently in the list of the persons to whom commands are addressed."[4]

The Kutumbin

The *kutumbin* or ordinary family head, espcially of the warrior class, seems to have formed the lowest rung of the feudal military hierarchy and he was usually a trooper, *aṣavārika.*[5] He was a land-owner, who held it of his superior and was bound to render military service.

India is a vast country comprising a large number of kingdoms and empires at each period or sub-period of its long history. A uniformity in feudal forms and terms cannot be expected. In Europe, the pattern developed in Germany was not the same as we witness in France or England. Allowing much scope for variation in patterns and terms, we can arrange the feudal hierarchy in the following form :

1. The *mahārājadhirāja,*
2. The *mahāsāmantamahārāja,* the *sāmantamahārāja,* the *sāmantadēva,* etc.,
3. The *mahāsāmantādhipati,* the *mahāmandalēsvarādhipati,* etc.,
4. The *uparika,* the *mahāsamanta,* the *sāmanta,* etc.,
5. The *mahārānaka,* the *rānaka,* the *ūr-gāvunda,* the *nāl-gāvunda,* etc.,
6. The *thakkura,* the *rāshtrakūta,* the *nāyaka,* the *bhogika,* etc.,
7. The *kutumbin,* the *asavārika,* etc.,

---

[1] For example, *Epigraphia Indica,* I, 100, 111 ; VI, 135, 141, 189, 286.

[2] For example, *Epigraphia Indica,* I, 224, 283. 288.

[3] *Epigraphia Indica,* II, 19.

[4] Ibid., II, 19.

[5] Ibid., II, 94.

The above steps in the hierarchy are clearly discerned from the records of the period. Many other terms could have been used for each of the above grades in different parts of the country and in the same part under different dynasties. We must exercise some caution in taking our records at their face value. An insignificant *sāmanta* might have been called by the scribe a *mahāsāmanta* and a very powerful noble might have been referred to simply as a *sāmanta*. On the whole, we can assert that, by the end of the first millennium, a feudal hierarchy was firmly established in India as it did in Europe and some other parts of the world.

Subinfeudation

Subinfeudation is considered by some an essential feature of the feudal system. In the preceding chapter we noticed that a large number of chief barons (tenants-in-chief) of the Sātavāhana rulers bearing the title of rāja and holding their territories of the Sātavāhana sovereigns (lords) granted large fiefs to vassals known as *mahārathis* and *mahābhojas* and that the *mahārathis*, in their turn, granted villages[1] and pieces of land in their own names as benefices with all the fiscal immunities attached to such grants and other privileges.

During the period covered by this chapter we find the *mahāsāmantamahārājas sāmantamahārājas*, *mahāsāmantādhipatis*, *mahāsāmantas*, *sāmantas*, *mahāmandalēsvarādhipatis*, *mahāmandalēsvaras*, *mandalēsvaras* as well as their vassals, the *mahārānakas*, *rānakas*, *ūr-gāvundas*, and *nāl-gāvundas*, granting fiefs to their subordinates and endowing villages. Even *nāyakas*, *bhogikas* and *thakkuras* have made land grants (benefices). Most of the feudal lords have made grants or endowment of villages or assigned taxes without the consent of the paramount power. Some of the grants issued by the feudal aristocracy acknowledge the suzerainty of the king or emperor by name or by his dynasty. In some cases we get the names of the intermediate overlords also.

Durvasena I of Valabhī was a vassal of the Gupta emperor. We have 16 grants issued by him, all acknowledging the suzerainty of the emperor. The Pavrajakamahārājas, who were Gupta feudatories in the region of modern Bāghelkhand, habitually issued their grants while they were still the vassals of the Guptas. Their early grants acknowledge the Gupta paramountcy, but do not mention the emperor by name.

---

[1] The *mahārathi* Vishnudatta gifted a cistern (*podhi*). *Epigraphia Indica*, X, p. 115. The *mahārathi* Somadēva, son of Vasishthi, the son of the *mahārathi* Mitradēva, gifted a village to the community (*samgha*) of Valūraka caves. *Epigraphia Indica*, X, p, 118.

"The bigger feudatory rulers of the Gupta age began the practice of subinfeudation. Dr. D. C. Sircar brings forward the evidence of the Nirmand inscription showing how Mahāsāmanta Mahārāja Varunasena enjoyed the allegiance of smaller feudatories. Mahārāja Vainyagupta (507-508 A.D.) had two vassals under him, namely, Pādadāsa Mahārāja Rudradutta and Mahārāja Mahāsāmanta, Vijayasena."[1] Among the feudatories of the Gurjara Pratihāras, Kokkalla I (875-925 A.D.) of the Kalachuri family made each of his seventeen sons a *mandalapati* of his kingdom.[2] The Tekkali plate (c 842 A.D.) was issued by Satrubhanja of the family of Bhanjas who was a *rānaka*. We have another instance of a grant being issued by a *rānaka* without the mention of any sovereign or overlord.[3] In one of the records we find that a county gāvunda (*nāl-gāvunda)* who was in charge of two groups of 300 villages each grants some lands to a temple. He expressly reserves for his own share a fixed revenue along with the king's share while making the grant.[4] From this grant and another[5] we learn that the county-gāvundas either singly or jointly with other *gāvundas*, could endow lands, transfer revenues and grant remissions.

We have already noticed that the *sabha* of the Brāhmans, like the Church in Europe, granted lands, controlled, assigned or remitted taxes,[6] and that Brāhmana donees in Tamil Nād were able to grant villages to others.[7]

Many of the grants were of a religious or charitable character, and a large number definitely military fiefs. There is a typical example of subinfeudation by the sovereign to a tenant-in-chief for military service and by the latter to his vassal for the same reason. Krishna III of the Rāshtrakūta dynasty of Malkhēd was at war with the Chola king Rājāditya. The former's Ganga vassal, Permanandi Būtuga (Bhūtayya), at the early stage of the war, killed Rāchamalla, the son of Ereyappa, and (as a reward) was granted the well-known Gangawādi ninety-six thousand (the whole of Mysore and adjacent areas). Later Būtuga himself slew Rājāditya treacherously, while they were out taking the air together. In approbation of the deed, Krishna III gave to Būtuga the districts known as the Banavāsi twelve thousand, the Belvola three hundred, the Purigere three hundred, the Kinsukād seventy and the Bāgenād seventy.[1] Būtuga, in his turn, recognising the valour of one of his followers, Manalarata by name, granted to him the group of villages known as the Atukūr twelve and the village of Koteyūr of the Belvola country, "being pleased with the manner in which Manalarata stood out in front and pierced (his foes)."[2]

---

[1] R. C. Majumdār, *History of Bengal* (Dacca, 1943), Vol. I, p. 52.

[2] H. C. Ray, *Dynastic History of Northern India* (Calcutta 1931 and 1936), p. 755.

[3] *Epigraphia Indica*, XXII, p. 268.

[4] Ibid,, XIV, pp. 365 seqq.

[5] Ibid., XVI, pp. 228 seqq.

[6] Nilakanta Sāstri, *The Cholas*, II, Part I, pp: 277 seqq:

[7] *Epigraphia Indica*, XVII, 298 seqq.

Further, we have seen above that a *rānaka* named Rāmadeva, who was a vassal of the Chālukya king, granted the village of Upalabada to his military officer *(nāyaka)* Rēvana as a reward for some heroic deed on his part.

The grant of land by a noble in a higher rung of the hierarchical ladder to the one in a lower rung was on the same condition on which the former held his fief of his superior, viz., payment of a cash fee and rendering of military service when called upon to do so.

Commendation

The institution of commendation in the earlier stages of feudal development in India, as we have already noticed, was from above. Later it started from below as well. In addition to large numbers of the population being transferred by the kings and other lords to the mercy (protection) of the grantees, many people in this period, unable to bear the tyranny and rapacity of the upper classes sought protection under powerful feudal barons. The *Rājataranyini* is full of such accounts. According to Huan Tsang, there already existed in the 7th century a practice of surrendering lands to landlords in lieu of protection, a practice which was known in Europe also.

Serfs

Having surrendered their lands, a large number of the former free peasants became landless, but bound to the soil of the lord to work on it for the barest sustenance. Thus, by the time Huan Tsang visited India, a large number of free cultivators has become serfs having surrendered the lands to the powerful. "Land was regularly donated with slaves *(dāsa)* or with the settlers thereon *(sa-kutumbi-jana)* to (Hindu) temples and Buddhist foundations in the kingdom of Champa by rulers of the 5th to the late 9th century."[3]

Even the so-called free-peasants were not really free. In many cases, because of the right of getting their lands cultivated by others, the donees could replace old peasants by new, thus reducing the old tenants to the position of landless labourers. The peasants settled under the sway of nobles and priests could very seldom produce a clean bill in regard to their money relations with the lords. Thus they gradually lapsed into a state of perpetual subjection from which they could not emancipate themselves by legal means. On the whole, we see serfdom emerging out as a characteristic corollary of feudalism and as a consequence of customary subjection and natural husbandry. The rest of the population of the villages escaped becoming serfs not because of the goodness of the ruling classes of India or Europe but because "in a state of backward agriculture and natural economy, it will be sometimes more profitable for the conquerors as well as for the conquered to leave the dependent population in their own households and on their own plots, at the same time taxing them heavily by way of tribute and services."[1]

---

[1] *Epigraphia Indica*, II, p. 168.

[2] Ibid., II, p. 174.

[3] *Journal of the American Oriental Society*, Vol. 4 (October-December, 1955), p. 234.

Forced Labour

The institution of *vishti* continued as of old. Dharasena II of Valabhī made a gift in A. D. 571-2 to a Brāhmana Rudrabhūti of various plots of land with the right to *vishti*, as the occasion for it occurred, not even to be pointed by the hand by any of the king's servants.[2] The Kāmasūtra of Vātsyāyana tells us that peasant women were compelled to perform unpaid work of various kinds, such as filling up the granaries of the village headman, taking things into or out of his house, cleaning or decorating his residence, working in his fields, and spinning yarn of cotton, wool, flax or hemp for his clothes.[3] The villagers could be subjected to forced labour of all varieties (*sarvavishti*).[4] Kalhana reports that during the reign of Jayasimha the villagers, in spite of their wailings, were forced to carry loads at the command of the commissariat.[5] In the reign of Harsha of Kashmīr some Brāhmanas were compelled to carry loads on their heads. The priests had recourse to hunger strike on a mass scale and forced the king to withdraw the order.[6] The donees could increase the amount of forced labour at their discretion for there was no hard and fast rule about it.[7]

Supplies

The king's right to live on the land and levy supplies, which was one of the features of feudalism, was also a recognised practice in this period. There was a king of Magadha, named Ādisimha, to whose dominions belonged the three villages—Bhramarasālmali, Chhingāla and Nabhutishandaka. Three brothers—Udayamana, Sridhantamana and Ajitamana—who were merchants, had gone on business from Ayodhya to Tāmralipti. Having made plenty of money, on their way home, they, for some reason or other, tarried at Bhramarasālmali. While they were there, the king Ādisimha came to the forest near the villages on a hunting expedition, and ordered the inhabitants to give him on *avalagaka* (or *avalagana*). The villagers, on receipt of the king's orders, went to the eldest brother, and entreated him to do the king's behest. He, thereupon, did send an *avalagana.*[1] The inhabitants of the village, in their delight, and with the permission of the king, made Udayamana the ruler of Bhramarasālmali and the other two brothers subornimate rulers of the other villages.[2] The supply of abode, cots and food (boiled rice) to the king, as one of the duties of the villagers, is referred to in a Kadamba plate.[3]

---

[1] *Encyclopaedia Britanica*, Vol. XX, p. 359 ; see under *serfdom*.

[2] Fleet, III, p. 38.

[3] *Kāmasūtra*, V, 5, 5.

[4] Dikshitar, *Gupta Polity*, p. 173.

[5] *Rājataringini*, VII, 112.

[6] Stein in *Rājataringini*, Vol. II, (appendices), p. 323.

[7] *Annals of the Bhandarkar Oriental Research Institute*, Vol. XXXVI (1955) p. 319.

Other characteristic economic features of a feudal society are the decline of slavery, very heavy taxes, paucity of coins, retrogression of trade and commerce and a self-sufficient local economy.

Slavery

Even in the previous period slave-agriculture was on its downward course. With the growth of feudal elements slavery was on the decline and slaves were used mostly for menial work in the house and for sexual indulgence. In South India, under the imperial Cholas, slaves, mostly female, were sold out to temples to take part in the ceremonial singing and dancing connected with the rituals of the temples. These female slaves known as the *deva adiyāls* or *dāsis* earned their livelihood as public prostitutes and also got allowances from the temples. Sometimes poor people voluntarily sold themselves into slavery to temples to escape starvation during times of famine.[4] Barring these details of temple slavery which meant resorting to prostitution and a stray reference in the *Upamitibhavaprapanchākatha*[1] which mentions that the aboriginal Bhillas traded in slaves, no material on slavery during this period is available ; for the rise of feudalism had dealt a sevre blow to slavery. "Compared with the abundant data of the pre-Gupta and Gupta periods about slavery, we have very scanty information about this institution in the present Age,"[2] the Age of Imperial Kanauj.

---

[1] The term signified several things ; among them there is the meaning cot also (Bohtlingk's Dictionary, quoted in the foot-note on page 344 of Vol. II of the *Epigraphia Indica*). Supplying cots to the king appears to be one of the duties of the villagers ; for exemption from the duty of providing "cots, abode and boiled rice", etc., is mentioned in a Kadamba plate published on page 15 of Volume VI of the *Epigraphia Indica.*

[2] *Epigraphia Indica*, Vol. II, p. 344.

[3] Ibid., VI, p. 15.

[4] ARSIE Nos 216-19 of 1925 and 64 of 1926.

Heavy Taxation

Taxation was already heavy in the preceding period. During this period it was so unbearable that peasants were forced to hand over their plots of land to their landlords, either in payment of money dues or being unable to continue in their status as free peasants. In addition to the old taxes which were very heavy, we come across certain new taxes. A Kadamba plate grants the village of Kotala to a Brāhmana exempt from the duty of providing cots, abode, and boiled rice, free from the ingress of soldiers and exempt from internal taxes and forced labour.[3]

The following dues are mentioned in the Rajor inscription of Mathanadēva (A. D. 875) : *bhoga* and *mayuta* income with all customary and not customary, fixed and not fixed receipts, the shares of all sorts of grain, the *khala-bhiksha* (the alms of the threshing floor), *prasthaka, skandhaka, mārganaka* and the fines for the ten offences.[4] Behind these oppressive taxes there appears to have been a sinister political motive in addition to the economic greed. King Lalitāditya of Kashmīr is said to have advised his successors that every care should be taken not to leave with the villagers more food supply than required for one year's consumption, nor more oxen than wanted for the tillage of their fields ; because if they should keep more wealth, they would become in a single year very formidable Dāmaras, strong enough to neglect the commands of the king. When once the villagers obtain clothes, women, woollen blankets, food, ornaments, horses and houses, such as are fit for the townspeople, then a change for the worse in the subjects fortune may be known for certain.[5]

Paucity of Coins

The economic condition of India during the pre-feudal period was conducive to the birth, growth and expansion of metallic currency. Archæological evidence and the literature of the period fully establish that various types of coins (punch-marked) were current in different parts of the country even before the invasion of India by Alexander. Quintus Curtius, a usually reliable authority, informs us that the king of Taxila presented to the Macedonian invader eighty talents (about 4,500 lbs.) of 'coined silver' (*Signati argenti LXXX talenta*) as a token of his homage and friendship.[1] Early copper coins are also found but not in such large numbers. When the Persian, Greek, Scythian and other early alien rulers of India issued their own money in India, the indigenous pieces, especially the silver ones, came to be designated by Indian writers as *purānas* (edlings) in order to distinguish them from the new coins.

---

[1] *Upamitibhavaprapanchākatha*, pp. 404-405.

[2] *The History and Culture of the Indian People*, IV, p. 373.

[3] *Epigraphia Indica*, VI, 15.

[4] Ibid., III, 264.

[5] *Rājatarangini*, IV, 345-352.

Menander's coins are found all over Northern India in great quantities. Silver coins of Azes I and Azilises, especially of the former, are abundant. Like the Indo-Greeks, the Sakas used Greek for the obverse Kharoshthi for the reverse legend. Coins issued by the new rulers of India were first current in the extreme North and North-West. The principal metals used by the Bactrian and Indo-Greek kings were silver and copper though some gold pieces are known. Several nickel coins were issued by some of these rulers. The North Indian coins of the pre-feudal period were not only enormous in quantity but bewildering in variety. In such abundance did the Kushāna kings mint copper money that it may be said without exaggeration to have remained in circulation in the Punjāb down to the nineteenth century.[2]

In South India, in addition to a large number of punch-marked coins, Roman and pseudo-Roman currency, the Sātavāhana or the Āndhra coinage and the money of the Kshaharatas and the Western Kshatrapas were in use. Besides the gold coins, a large number of small copper coins from Rome were imported to be used as currency for purchase of comparatively small values by the Roman or local population. As we have observed in Chapter V, a very large quantity of Roman coins of gold, silver and copper have been recovered at Madura and the surrounding districts. Roman figures were copied by many Indian rulers.

The Sātavāhanas and some other South Indian rulers minted coins in lead, potin and copper and issued different types of coins for the various regions under their sway. Similarly the coins of the Kshaharatas and the Kshatrapas we get in potfuls, especially of copper and potin. Samudragupta struck only gold ; for the bazaars were full of

---

[1] Brown, *Coins of India* (Mysore), p. 52.

[2] Ibid., p. 42.

Kushāna copper coins. Since there has always been an insatiable demand for gold in the country, seven other distinct varieties appeared during the reign of Samudragupta. The gold coinage of Chandragupta II is even more abundant.

Thus during the period of consolidation of private property and the early stages of the growth of feudal elements there was a plethora of coins issuing from mints in an endless and astounding variety. But, with the growth of feudal elements into bolder reliefs during the 5th and 6th centuries, the downward course begins. Only two types of gold coins of Skandagupta (455-480 A. D.) are known. After the death of Skandagupta (480 A. D.), the Gupta empire rapidly broke up. The inferiority and comparative scarcity of his gold coins, the still more debased issues of his brother Puragupta and the subsequent kings and the disappearance of silver money bear evidence to the shrinkage of coins due to the rise of the feudal forces and a self-sufficient local economy.

The sparseness and inferiority of the coinage of this period, which we shall notice in greater detail in the later part of this chapter, must be attributed to the general insecurity caused by a continual quarrel between the numerous feudal magnates which hampered local and ruined foreign trade. Thus the demand for coins of the precious metals as the medium of exchange diminished. It is a most illuminating fact that gold "disappears from the coinage of Europe at about this very period while silver is reduced to the meagre Carolingian *penny* standard."[1]

Retrogression of trade

With the rise of feudalism, there was a retrogression of trade and commerce. We do not get the ample details about trade centres in India, the regulation of market and the inland trade that we get in the Maurya period or the period immediately following it. Records concerning internal trade during this period are almost absent. Nor do we get during this period the potfuls of Roman gold and silver coins, which we notice in the earlier periods. Medhātithi writes that precious stones and pearls in the South, horses in the West, elephants in the East, saffron, silks and woollen articles in Kashmir were royal monopolies and private trading in them was punished with confiscation of all the property of the offender.[2] Seaborne trade between the East and the West had passed into Arab hands.

[1] Brown, p. 55

[2] On Manu, VIII, 39,9.

In the earlier periods there was an extensive direct trade with Rome and an enormous flow of Roman gold into India. According to Pliny, India, China and Arabia absorbed between them one hundred million sesterces (£ 1, 100,000) per annum of which nearly half went to India.[1] In 410 A. D. the Goths entered Rome and fifty years later, the mightiest empire the world has ever seen ceased to exist. The Hunas poured into India in 500 A. D. and destroyed the Gupta empire. Thereafter, feudal elements sprang up both in the former Roman empire and in India putting an end to all direct trade between them. The Roman coins found in India tell their own tale.[2]

We have observed in the previous chapter that a very large quantity of coins of the early Roman emperors has been found in India, especially in the South. An analysis of the finds gives us coins of all the emperors from Augustus to Alexander Severus (27 B. C-235 A. D.).

Then after a temporary abeyance of trade between Rome and South India, it seems to have revived. Hereafter, although the list is not so complete, we possess Zeno's coins which carry us to almost the end of the Roman empire. Trade with the West, which revived under the Byzantine emperors, continued up to the sixth century A. D. After that it completely ceased. During the period covered by this chapter there was practically no direct trade with the West and the most fruitful intercourse with China came to an end in the 8th century A. D.

Agriculture

The art of agriculture advanced with time, slowly but surely. A few new varieties of crops are observed during this period. The *Abhidhāna Ratnamālā* mentions three varieties of *sāli* rice. We have noticed *sāli* as a kind of rice fit for the king's table. Now we learn that there were three kinds of this special variety.[3] The same authority mentions another variety of rice which ripen in 60 days.[4] We come across two varieties of mustard (black and red), wild sesamum (*jaritila*). Medhātithi gives a list of 17 grains most of which we have observed in the earlier chapters. A verse of the *Kāvyamīmāmsa* praises the excellence of Pundra (North Bengal) sugar cane which yielded juice without a pressing instrument. In the same verse we get the description of another variety of sugar-cane (*kosakāra*) with its mass of flowers. The *Upamitibhavaprapanchākatha* reports machines (probably of wood) for crushing big sugar canes.

---

[1] Rawlinson, *Intercourse between India and the Western World*, p. 103.

[2] J. R. A. S., 1904, pp. 591 seqq.

[3] Ibid.

[4] *Abhidhāna Ratnamāla*, II, pp. 425 seqq.

According to the *Abhidhāna Ratnamāla*, the soil was classified into excellent (*mritsna*), fertile (*urvara*), fallow (*khila*), barren (*irina*). Further classification was into desert area (*maru*), grassland (*sādvala*) and land abounding in reeds (*nadvala*). The soil was also classified with reference to its colour—black, yellow, etc., and with reference to the source of water—river-fed or rain-fed.[1] Different kinds of fields were selected for various kinds of crops. The *Smriti* expected a good Vaisya to know what soil was suitable for a particular kind of crop and what soil was not suitable, and what harvest could be expected from a special variety of a seed. He was also expected to know what seed was to be sown thickly and what sparsely.

Like the Greek writers at an earlier period, the Arabs, who came to India during this period, attested to the fertility of the soil and the richness of cultivation both of grain and fruit.

Building

It was during this period that the aspiring mediæval towers came into being which contrast "most markedly with the static character of the early low flat-roofed temples."[2] Huan Tsang describes the Nālanda University thus : "The whole establishment is surrouned by a brick wall. One gate opens into the great college standing in the middle, from which are separated eight other halls. The richly adorned towers, and the fairy-like turrets, like pointed hill-tops, are congregated together. The observatories seem to be lost in the vapours of the morning, and the upper rooms tower above the clouds...And then we may add how the deep, transculent ponds bear on their surface the blue lotus, intermingled with the kie-ni (*kamaka*) flower of deep red colour and at intervals the mangroves spread their shade.

"All the outside courts, in which are the priests' chambers, are of four stages. The stages have dragon-projections and coloured caves, the pearl-red pillars, carved and ornamented, the richly adorned balustrades, and the roofs covered with tiles that reflect the light in a thousand shades, these things add to the beauty of the scene."[3]

The brick temple of Lakshmana at Sirpur, Rāipur district, is one of the most beautiful in all India. It is unsurpassed in the richness and refinement of its ornament. It may perhaps be assigned to the

---

[1] *Abhidhāna Ratnamāla*, II, 3-6.

[2] A. L. Coomaraswamy, *History of Indian and Indonesian Art* (Germany, 1927), p. 83.

[3] Beal, Vol. II, p. 11.

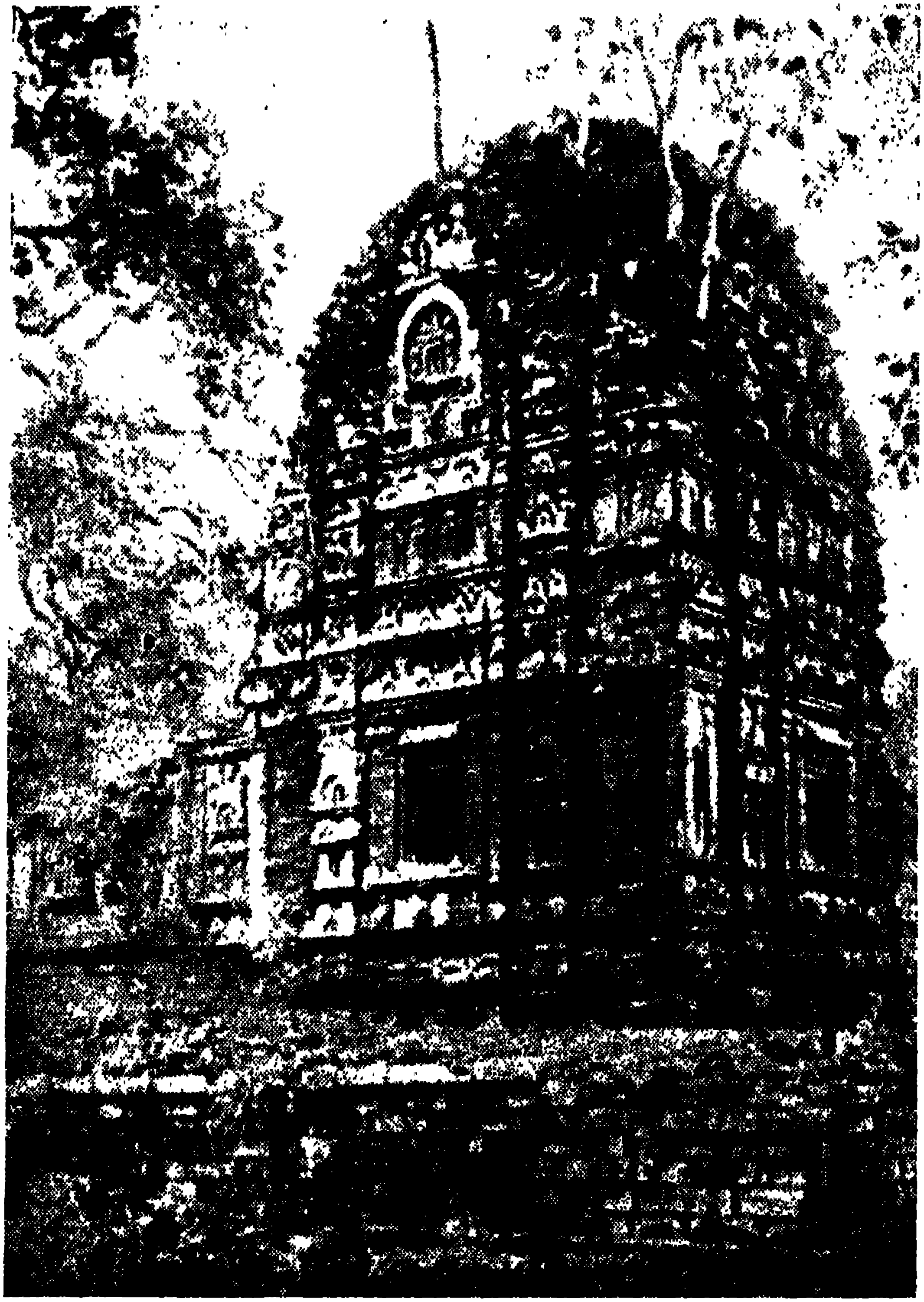

PLATE XXIV

The Lakshmana temple (brick), Sirpur, 7th century A. D.

reign of Harsha. The most important Chālukya temples at Pattakadal show the strongest possible evidences of Pallavà influence. The great Virupāksha temple (740 A. D.) was most likely built by workmen brought from Kānchipuram. It is one of the noblest structures in India. The great monoliths cut from a series of boulder-like granulitic outcrops on the sandy shore of Māmallapuram all belong to this period.

Metallurgy

Metallurgy, which had reached a high degree of efficiency in India must have continued during this time also. As we have already observed,[1] iron smelting was known to the Indians since antiquity, especially in the South. The writings of the period mention the process of manufacturing crucibles for melting iron. The Kashmīr manuscript of Vrinda (c. 900 A. D.) prescribes iron to be heated first and be "macerated in the emblic myrobalan and *tremia nudiflora* and exposed to the sun and again to be macerated in the juice of certain other plants and then to be rubbed in a mortar." Chakrabāni says that after a piece of iron is rubbed with the impalpable powder as described by Vrinda, it is to be heated to fusion point and plunged into the decoction of the myrobalans and roasted repeatedly in a crucible.[2]

Since fighting was the passion of the feudal era, great attention was paid to the manufacture of excellent swords. Apart from the praises of the Indian swords, sung by poets of this country, we get a large number of foreign verses eulogising the Indian blade. Tarafah, an Arabian poet, sang towards the end of the 6th century A. D. thus :

My sharp two-edged Hindi sword's inner part
    My hip, I often swear, shall not e'r part.
When I rise and inflict a ghastly blow,
    Without a second, the foe it lays low.
A 'brother' sure, recoils not, but is tough ;
    When I say, "Go", he who wards cries, "Enough".
Men, clad in armour, rushing in a band,
    Reach me not, when I grip it in my hand.[3]

The *AgniPurāna* regards a sword 50 *angulas* (about a yard) in length, producing the clink of an ornament as the best. Copper, brass, iron, lead, tin, silver and gold are mentioned in the literature of the period.[1] Surāshtra was famous for its bell-metal industry and Venga (East Bengal) for that of tin.[2] The *Agni Purāna* mentions five centres manufacturing swords.[3] Ibn Hawqal says that Daybul in Sind was famous for the manufacture of swords. The inscriptions of the great temple at Tanjore contain a list of the gifts of images, ornaments and vessels of gold, silver and copper. A colossal copper water-pot weighing 3083 *palas* (about 250 lbs.) for crowning the copper pinnacle of the Tanjore temple was presented by Rājarāja I.[4]

---

[1] See Chapter IV.

[2] Sir P. C. Roy, *History of Hindu Chemistry*, pp. 62-63.

[3] Zawzani, *Al-Mu'allaqāt al-'Ashrah* (Cairo), pp. 67-68 ; translation by the present author.

Jewel-making

The *Agni Purāna* gives a long list of 33 kinds of gems and enumerates the good (superstitious) qualities of diamonds, emeralds, rubies, pearls, sapphires and *vaidurya*.[5] The Tanjore inscriptions differentiate between the various varieties of diamonds, rubies and pearls, and they point out the flaws to be found in these gems.[6] The lists of presents recorded in these inscriptions include various kinds of gems and indicate the uses to which they were put in actual practice. The number and weight of these objects, which are always given with scrupulous care, occasionally reach formidable, proportions.[7] The list of presents given by Rājarāja I, according to one of these records, included quite a few nine-jewelled rings, with one diamond, one sapphire, one pearl, one topaz, one cinnamon stone, one coral, one emerald, one lapis-lazuli and one ruby set on each."[8] Again, among the donations given to the temple by Rājarāja I, are mentioned[9] gold necklaces, armlets, bracelets, armrings, etc., set with rubies, emeralds, diamonds, sapphires, pearls, amethyst crystals, sandal wood covered with plates of gold and set with various kinds of jewels and so forth. The gift of the queen of Rājarāja I included[10] ornaments on which were strung pearls, corals, lapis-lazuli, and sapphire. Ornaments set with pearls of three varieties, corals, lapis-lazuli, and other gems were presented[11] by the elder sister of Rājarāja I. Presents given by the same ruler's general comprised[12] golden ornaments set with pearls, diamonds and crystals. The temple manager donated to the shrine of Ganapati, at the same temple, a magnificent ring made of gold and set with 8 rubies, 2 crystals, 14 diamonds, and 119 pearls.[1] Among the presents made to the temple by a private donor in Rājarāja I's reign were included[2] golden ear-rings set with pearls, pearl ornaments, a gold marriage-badge set with fine diamonds and one ruby, sacred foot-strings set with pearls. In a list of treasures belonging to the same temple are mentioned[3] a diadem containing more than 343 *karanjus* of gold, ten diamond crystals, 64 corals, and no less than 13,328 pearls as well as nine golden girdles adorned with crystals, pearls and corals. Another list of the treasures belonging to the same temple dated in the reign of Rījarāja I includes[4] sacred girdles and bracelets of gold set with pearls, a sacred crown of gold set with diamonds, crystal and pearls, a sacred garland of gold set with crystals and pearls, and a sacred outer parasal of gold set with crystals and pearls. Many of the sacred girdles contained more than 1,500 pearls each, while the outer parasol contained 1372 pearls.[5]

---

[1] *Abhidhāna Ratnamāla*, II, 15-19.

[2] Ibid., II, 15 seq.

[3] CCXLV, 21 seq.

[4] *South Indian Inscriptions* II, Nos, 1, 2, 29, 30, 32, 34, 39, 42-44, 46-52, 56, 79-81, 84, 91.

[5] CCXL VI, 1 seq.

[6] *The History and Culture of the Indian People*, Vol. IV, p. 401.

[7] *South Indian Inscription*, Vol. II, No. 93.

[8] *The History and Culture of the Indian People*, Vol. IV, p. 401.

[9] *South Indian Inscriptions*, Vol. II, No. 93.

[10] Ibid., Nos. 34, 46, 51.

[11] Ibid., No. 6.

[12] Ibid., No. 39.

Describing the ornaments worn by Indian kings, Abū Zayd of the ninth century writes that the kings wear in addition to costly ear-rings, "collars of great price, adorned with precious stones of diverse colours, but especially green and red ; yet pearls are what they most esteem ; and their value surpasses that of all other jewels...The grandees of their court, the great officers and captains, wear similar jewels on their collars.[6]

Textiles

Textile industry seems to have flourished as in the ancient days, but not much of India's textile products could be exported abroad on account of feudal limitations on foreign commerce and inter-state trade ; yet, the industry continued to supply the local demands. The Arab writer Sulaymān (9th century) speaks of a stuff made in Bengal, which was so fine and delicate "that a dress made of it may be passed through a signet ring."[7] The writings of this period mention woollen and hempen yarns, garments made of *ranku* deer's hair and of the wool of sheep and goats.[8] Three colours are mentioned in connection with dyeing—red, blue and yellow.[9] Many of the varieties of textile products, which we have noticed in the earlier chapters, are mentioned in the records of the periods later than the one with which this chapter is concerned. Certainly arts and crafts suffered a set back on account of the insecurity inherent in a feudal society : yet the old talents of the workers appear to have lingered through this period to be revived under more favourable circumstances.

---

[1] *South Indian Inscriptions*, No. 86

[2] Ibid., No. 79

[3] Ibid., No. 59

[4] Ibid., No. 3

[5] *The History and Culture of the Indian People*, IV, pp. 408-409

[6] *Ancient Accounts of India and China*, pp. 98-99

[7] Elliot and Dowson *History of India as told by its own Historians*, I, p. 361.

[8] Medhātithi on Manu, II, 98 ; VII, 321 ; VIII 326,

[9] *Abhidhāna Ratnamāla* II, 333 seqq.

Umbrellas

Different kinds of umbrellas were manufactured. We find references to umbrellas in the two epics and also in the later literature. Costly umbrellas served as canopies over the heads of kings and princes and a large number of contemporary grants mention that the king's umbrella bearers should not enter the endowed villages. Cheap umbrellas were used by both men and women to protect themselves from the sun and the rain. Umbrellas were carried over the heads of idols when they were taken out in procession.

Other Industries

Other industries like the manufacture of sugar, salt, leathern articles, boats and a host of other commodities which we have noticed in the earlier chapters should have continued. We get references to fire-arms, naphta, and machines for throwing stones. Fire-arms could not have meant anything other than fire-arrows, or combustible balls thrown from catapults. A lighted arrow is reported to have been fixed on the side of Dāhir's elephant by an Arab archer. The Arabs brought very heavy siege engines with them. The ballista named "the Bride" which shattered the talisman flag-staff of the city of Daybul in Sind is reported to have required five hundred men to work it. Such enormous wooden machines should have already existed in India (for Kautilya mentions several engines of war), and some might have been copied from the foreigners who invaded India from time to time.

Guilds and Associations

Early guilds appear to have continued. Medhātithi defines the guild *(sreni)* as consisting of people following a common profession, such as tradesman, artisans, money-lenders, coach-drivers and so forth.[1] The guilds sometimes compounded with the government for payment of a fixed sum in place of the usual share of their profits, and cornered the market for their own profit. "Certain principal tradesmen", says Medhātithi, "offer to the king his royal dues fixed verbally before him : 'We are living by this trade, let the tax thereupon be fixed at such and such a rate, be our profits more or less'. Now, on the king agreeing to this proposal, the tradesmen join together and lay down certain rules among themselves tending to bring them large profits and injure the interest of the kingdom, e.g., such a commodity should not be sold for a specific period. If any one among them transgresses these rules, he shall be punished for the breach of the guild laws."[1]

---

[1] On Manu, VIII, 41.

In addition to the *(sreni)*, there seem to have flourished some mercantile associations, *samghas*. A *Samgha* is defined by Madhātithi as a community of persons following the same pursuit, though belonging to different castes (*jāti*) and regions (*dēsa*). There were *samghas* of merchants (*vanik*), Medhātithi lays down that among architects, masons, carpenters and the like the wages shall be distributed on the principle that he who does the most difficult part of the job shall receive more and he who does the easier part shall get less. In the case of artisans, Brihaspati and Kātyāyana state that the four grades, namely apprentice *(sikshaka)*, advanced student (*abhijna*), expert (*kusala*) and teacher (*āchārya*) shall divide the profit in the proportion of 1 : 2 : 3 : 4 respectively.

Prices

We are fortunate in having the prices of a large number of articles mentioned in terms of measures of paddy or cash in the inscriptions of Tanjore, which "supply us evidence to conclude that the modern *kalam* at Tanjore (which is equal to 24 Madras measures) is approximately equal to the one in vogue towards the end of the 10th century."[2] One Madras measure of paddy weighs about 2 lbs or 1 seer (one measure of rice weighs over 3½ lbs). The units of measure mentioned in the records (in the ascending order) are *sevidu*, *ārāku*, *urakku*, *uri*, *nāri (padi)*,[3] *kuruni (marakkāl)*, *padakku*, and *kalam*, 5 *sevidus* make one *ārākku*, 2 *ārākkus* make one *urakku*, 2 *urakkus* make one *uri*, 2 *uris* make one *nāri* or *padi*, 8 *nāris* make one *kuruni* or *marak kāl*, two *kurunis* make one *padakku* and 6 *padakkus* make one *kalam*. The weights of *paddy* measured by these units are roughly as follows :—

Sevidu	=	½	tola	*Nāri* or *padi*	=	½	lb.
Ārākku	=	2½	tolas.	*Kuruni*	=	4	lbs.
Urakku	=	5	tolas.	*Padakkū*	=	8	lbs.
Uri	=	10	tolas.	*kalam*	=	48	lbs.

---

[1] On Manu, VIII, 41.

[2] Altekar, *The Rāshtrakutas and their Times*, p. 377.

[3] 4 *nāris* or *padis* of Tanjore were equal to one Madras measure of today.

The following are the prices of articles of daily use given in the Tanjore inscriptions[1] about the end of the 10th century A.D. :—

Çommodity	*Quantity*	*Price*
Paddy	2 kalams	1 kāsu[2]
Ewes	3 heads	1 kāsu
Sugar	2 palms	1 kāsu
Pulse	1 nāri	3 nāris of paddy
Dhal	1 nāri, 3 urakkus and 1 ārākku	5 nāris, 1 uri, and 1 ārākku of paddy
Gram	3 sevidus	1 urakku of paddy
Ghee	1 urakku, 1 ārākku and $3\frac{3}{4}$ sevidus	1 kuruni and 7 nāris of paddy.
Tamarind	8 palams (25.6 tolas)	1 nāri of paddy
Curds	3 nāris	1 kuruni and 1 nāri of paddy.
Plantain	18	5 nāris of paddy.
Salt	1 urakku	1 urakku of paddy.
Tender plantain leaves	6	1 nāri of paddy.
Areca nuts and betel leaves	30,60	4 nāris and 1 urakku of paddy.
Bark (cinnamon)	1 kāsu (15 grains)	1 nāri of paddy.
Cardamum seeds	1 kuruni and 4 nāris	1 kāsu (2 kalams of paddy)
Çhampaka buds	1 padakku	1 kāsu
Camphor	3 karanjus (144 grains)	1 kāsu
Khaskhas roots	605 palam (24.2 sers)	1 kāsu

One *kāsu* or 15 grains of gold which was equivalent to $1\frac{1}{10}$ *tolas* of silver (in value) could purchase 2 *kalams* of paddy. About 44 Madras measures or as many sers of paddy could be purchased for a rupee of pure silver. Each rupee weight of silver bought 22 Madras measure of par boiled rice weighing about 35 *sers* (each measure of par boiled rice weighing about $1\frac{3}{4}$ sers). One *urakku* of paddy could buy one *urakku* of salt. 31 *sevidus* of paddy had to be given for one sevidu of pepper. One *sevidu* of mustard cost 16 *sevidus* of paddy. *Jīraka* had to be purchased by giving 43 times its quantity of paddy. One *Sevidu* of ghee cost about two urakkus of paddy. The ratio was 1 : 20. Paddy sold at about 44 measures per rupee. Hence one rupee could fetch about 2¼ Madras measures of ghee.[1] Plantains were sold at between 50 to 75 per anna. *Lilāvati*[2] gives one *dramma* (=60 grains of silver) as the price of 300 mangoes. Thus one grain of silver could purchase 5 mangoes. An anna could get about 60 mangoes. Sugar seems to have been very costly. 3 ewes could be purchased for a *kāsu* (16 measures of paddy each), 3 cows for 2 *kāsus* (the price of each cow being double that of an ewe), and 3 buffaloes for 4 *kāsus* (each buffalo costing as much as two cows). An acre of tax-free land appears to have cost between 15 to 60 *kāsus* according to the quality of the land.

---

[1] *South Indian Inscriptions*, Vol. II, Introduction, pp. 17 and 18.

[2] A *kāsu* contained 15 grains of gold which was equal in value to $1\frac{1}{10}$ *tolas* of silver.

From two records[3] of this period we learn that 900 *sers* (37½ *kalams*) of paddy were required to meet the expenses of feeding one man throughout the year with one rich meal a day. The cost of 37½ *kalams* was 18¾ *kāsus* which was equal to Rs. 20.625. Thus a rich meal cost nearly an anna. A poor meal cost half that amount, viz., nearly half an anna a meal. The cost of one rich meal was equal to that of about 2½ *sers* 2½ Madras measures of paddy and that of a poor meal that of 1¼ *sers* of paddy.

Wages

The wages which were paid in cash or in kind were fixed by contract according to the nature of the work to be done, the contract sometimes extending over a period of six months or even a year. Wilful breach of the contract rendered the labourer liable to forfeiture of his wages as well as to payment of compensation to his employer.

The Tanjore inscriptions furnish us with information concerning the wages of different classes of skilled as well as unskilled labourers employed in temples. The wages which were specified in terms of quantities of paddy or coined money, have been collected and arranged by Prof. Hultzsch in the introduction to the South Indian Inscriptions, Vol. II, as follows :—

---

[1] The difference in my calculations and those of Dr. Altekar is due to our difference in the silver value of the *kāsu* which he equates with Rs. 1-10-0. According to my calculation 15 grains of gold were equal to $\frac{15 \times 14}{192}$ rupees which is equal to about $1\frac{1}{10}$ of a rupee and not Re. 1 and annas 10.

[2] Verse 89.

[3] *South Indian Inscriptions, II, No. 28 and II,* No. 151.

PLATE XXV

Rājarājesvara Temple, Tanjore, (c. 1000 A. D.).

Employee	**Wage**
Brahmachārin temple servant	2 kurunis of paddy per day and 4 *kāsus* per year.
Permanent temple servant	3 kurunis of paddy per day and 4 *kāsus* per year.
Garland-maker	2 kurunis of paddy per day and 5 *kāsus* per year.
Dancing girl	100 kalams of paddy per year.
Dancing master	200 kalams of paddy per year.
Lute player	175 kalams of paddy per year.
Musician (Sanskrit)	150 kalams of paddy per year.
Musician (Tamil)	150 kalams of paddy per year.
Drummer	100 kalams of paddy per year.
Temple Accountant	200 kalams of paddy per year.
Deputy Accountant	75 kalams of paddy per year.
Parasol-carrier	40 kalams of paddy per year.
Lamp- lighter	50 kalams of paddy per year.
Washerman	100 kalams of paddy per year.
Barber	50 kalams of paddy per year.
Tailor	100 kalams of paddy per year.
Jewel-stitcher	150 kalams of paddy per year.
Brazier	100 kalams of paddy per year.
Master carpenter	150 kalams of paddy per year.
Ordinary carpenter	75 kalams of paddy per year.
Goldsmith (superintendent)	100 kalams of paddy per year.
Tiruppadium reciter	2 kurunis of paddy per day.[1]

According to an Ukkal record,[2] the drawer of water was paid 40 kalams of paddy a year.

Dr. Altekar considers that the wages were fairly liberal. Let us examine the wages of the lowest paid servants of the temple, the parasol-carrier who got 40 kalams (=960 *sers*) of paddy a year. It amounted to less than 2⅔ *sers* a day. We have seen that to give one poor meal to a man 1¼ *sers* of paddy was required. Hence 40 kalams were only enough to give two poor meals a day for one man. The Deputy Accountant's 75 kalams could have provided two poor meals a day to himself and his wife. What about the other dependents, and other amenities of life ? Even those who received one hundred kalams of paddy could have met the cost of feeding 3 people, each with 2 poor meals a day.

---

[1] *South Indian Inscriptions*, Vol. II, Introduction, p. 18.

[2] Ibid ; III, Ukkal, No. 4.

The average family should have had more than 3 persons. Dr. Altekar finds consolation in the fact that the wives and children of the temple employees should have also been earning some income, but we possess no definite information.

Trade and Commerce

Arab geographers mention Daybul in Sind, Cambay, Thāna Ṣopara, and Sindan (from which pepper was exported) and Kullam, (Quilon). Daybul was "a large mart" and the port not only of Sind but also the neighbouring regions. Ibn Khurdādhbih and others (end of 9th century) mention different kinds of aloe-wood, sandal-wood, camphor, camphor-water, nutmeg, clove-pink, cubele, cocoanut, vegetable stuffs, costus, rattan, indigo and bamboo as exported from India. According to Ibn Rustah, teak-wood was exported from Western India (Malabār) where it was extensively grown. Abū Zayd reports that Kāmarūp produced a kind of aloe-wood called *Kāmarūpī* which was valued sometimes at 200 *dīnārs* per *mann* (two lbs.) and which was tender enough to retain the impression of a seal stamped on it. According to Mas'ūdī, this particular variety of aloe-wood came from Khemer (Cambodia). From a kingdom called Rahma by the Arab writers came a remarkable fine variety of cotton fabric which, Sulaymān Tājir says, was so light and fine that a rope made of that cloth could be passed through a signet ring. Some scholars identify Rahma with the Pāla kingdom and the fabric with the Dacca muslin, but from the other products of Rahma reported by the Arab authors, the name must refer to Burma. For instance, Sulaymān and Mas'ūdī write that gold and silver were found in the kingdom of Rahma.[1] They also inform us that they have heard of gold and silver mines in the kingdom of Gujira (Gurjara-Pratīhāra kingdom of Kanauj). These two writers further report that horns of rhinoceros were exported from the kingdom of Rahma to China for being made into fashionable and costly girdles which were prized so highly by the Chinese royalty and grandees that they sometimes fetched 2,000 or even 4,000 *dīnārs* each.[2] Ibnu 'l-Faqīh states that perfumed rats were exported from Sind to Zābag.[3] From the same writer we gather that the kingdom of Ruhmi produced "*samara*" (yak-tail) hair from which fly-whisks were manufactured.

According to the *Kāvyamīmāmsa*, Uttarapatha produced skins and chowries made of *chamara* deer's tail and Pūrvadēsa produced musk. Horses from Turkistān continued to be imported during this period also. Dates came from Basrah, and wine from Laodicia. Cosmos Indocopleustes corroborates the Arab writers that aloes, clove-wood, sandal-wood and *sīsam*-wood were exported to the Western ports.[1] Huan Tsang writes that there was commercial connection in the seventh century between Tāmralipti, the seaport of Bengal, on the one side and Indonesia and Indo-China on the other. According to the same authority Kongoda (modern Ganjam district) became very rich during this period because of its maritime trade.

---

[1] The word Burma written in Arabic could have been corrupted into Brahma and then into Rahma by simply omitting a dot.

[2] Ferrand, pp. 44 and 105.

[3] Ibid, 55.

This is all the information that we could gather about the trade and commerce of this period. Internal trade was at the lowest ebb. We do not hear at all concerning any inter-state trade. Direct trade with Europe had discontinued, and we do not get any information about trade with China. The last century of Tang rule (A. D. 618-707) was full of troubles and the Arab incursions in Central Asia probably interfered with the free intercourse between India and China. The important factor was the rise of a feudal society which was incapable of much foreign intercourse.

Coinage

"The centuries which elapsed between that great turning point in Indian History, the Huna invasions, and the coming of the Muhammadans in the twelfth century, suggest several points of comparison with the so-called Dark Ages of European history. It was an age of trsnsition, pregnant with important developments for the future, but individualist expression, both in art and literature, remained largely in abeyance. This want of originality is particularly marked in the limited coinage of the numerous petty kingdoms which flourished and declined during the seventh, eighth and ninth centuries."[2] The impression created by the magnificent coinage of the Guptas upon the people of Northern India must have been very great ; but after the general devastation caused by the Hunas, few princes could have retained sufficient wealth in their treasuries to imitate it. Bengal, safe from these devastations, produced some of the best imitations. Although the military occupation of the Hunas lasted but thirty years (500-530 A. D.), the barbarians succeeded in introducing the Sāsānian types of coins into India, for they themselves originally belonged to the Persian stock.

The western silver coinage of the Guptas may have been imitated by some of the powerful Maitraka rulers of Valabhī. Far more important are the coins struck by Isānavarman, the Maukhari, and his successors whose kingdom was in Bihār. In 1904, a labourer found an earthen pot in the Fayzābād district (Awad) containing one gold, eight copper and 522 silver coins. The gold piece was an Indo-Scythian issue and the copper ones came form Kashmīr. Among the silver pieces R. Burn could make out 9 silver coins issued by the Maukhari ruler Īsānavarman, 6 of Sarvavarman and 17 of Avantivarman. 290 coins were silver pieces of Harshavardhāna. The names on the other coins were worn out and in many cases the dates also.[1] "It is a striking testimony to the havoc wrought by the Huna invasions that these tiny silver pieces (struck after the central peacock type of the Gupta coinage) are the only coins known to have been issued by this great king (Harsha) who built up, on the ruins of Northern India, an empire scarcely less extensive than that of the Guptas."[2] The paucity of coins during this period should be attributed more to the feudal nature of the economy than to the Huna invasion.

---

[1] Cosmas, XII in McCrindle, Ancient India, pp. 161 seqq.

[2] J. C. Brown, *Coins of India* (Mysore), p. 50.

The coins of the various Rājput princes ruling in Hindustān and Central India are usually gold, copper or billion, very rarely silver. At this period the world supply of silver seems to have been drawn chiefly from Central Asia. The rise of the Arab power and the shrinking of foreign trade between India and the rest of the world due to feudal self-supporting local economy must have curtailed, if not cut off completely, the import of silver from abroad. So we find the Rājput states reduced to employing an alloy (billion) which was almost certainly used by them as a substitute for the more precious metal. In Kashmīr a number of gold coins of the eighth century are known. These are for the most part very base gold and the workmanship the crudest. With the accession of Sankaravarma (833 A. D.) gold practically disappears. From the middle of the ninth century, the kings, whose names are given in the *Rājataringini*, are represented by copper coins, but the uniform degradation of the fabric deprives them of all interest.

The first great dynasty to dominate Southern India was that of the Chālukyas. The earliest silver coin assignable to a Chālukya prince is a base silver piece of Vishnuvardhāna (615-633 A. D.). The curious cup-shaped *padma-tankas* (lotus tankas) were possibly first stuck by the Kadambas inhabiting Mysore and Kanara. They were copied by the Western Chālukya kings.

---

[1] J. R. A. S., 1906, pp. 845-850. Also see the Catalogue of the coins of the Guptas, Maukharis, etc., in the Lucknow Museum by J. C. Brown.

[2] Brown, *Coins of India*, p. 49.

The earliest Pāndya coins retain the ancient square form, but are die struck, with an elephant on the obverse and a blank reverse. Later coins have a peculiar angular device on the reverse. Others of a still later period display a diversity of emblems, such as wheels, scrolls and crosses. The Pāndya coins, assigned to a period from the seventh to the tenth century, are gold and copper, and all bear the fish emblem adopted by the later chiefs. The earlier coins of the Chola dynasty (before 985 A. D.) are gold and silver pieces, portraying a tiger seated under a canopy with the Pāndya fish. The later Chola coins are all copper. Only one coin has been attributed to the Chera dynasty —a silver piece in the British Museum with Nāgarī legends on both sides.

Certain marked characteristics belong to the coinage of the Pāndya kingdom which, in spite of foreign invasions and their consequent innovations, have persisted until recent time. Gold and copper were the metals used almost exclusively ; of the former were two denominations, the *hun or varāha* (50 to 60 grains) and the *panam* (5 to 6 grains) based respectively on the weights of two seeds, the *kalanja* or molucca bean (Cæsalpina bonduc) and the *manjadi* (Adenathera pavonina). Copper coins of the Pāndyas were called *kāsu*, of which the English corruption is 'cash'. The rare silver coins appear to have followed the gold standard. The *kāsu* was a gold coin weighing 15 grains in the Chola country.

The Hindu kings of Ohind (11th century) issued some coins. Although some of them vary in weight and size, we get the humped bull or elephant on the obverse of all of them with slight variation on the reverse.[1] One dozen coins of Gangaya Dēva (1015-40 A. D.), the Chedi ruler of Jabalpur, have been noticed, eleven of which have the same legend on the obverse and reverse. The same is the case with all the seven coins issued by five rulers (1055-1280) of the Chandela dynasty of Jejakabhukti (Bundelkhand). Twenty-one coins of three rulers of the Haihaya dynasty of Mahākosala (Chhattīsgarh) carry the same obverse and reverse. It is almost the same story about the coins minted by the Tomara dynasty of Ajmer and Delhi, the Rāthor dynasty of Kanauj, the Chauhān dynasty of Delhi and Ajmer and the dynasty of Narwār and others.[2] We come across the following names of coins in the records of the period :—

---

[1] V. A. Smith, *Catalogue of the Coins in the Indian Museum*, Calcutta, Vol. I (Oxford, 1906), pp. 144 seqq,

[2] Ibid.. 150 seqq

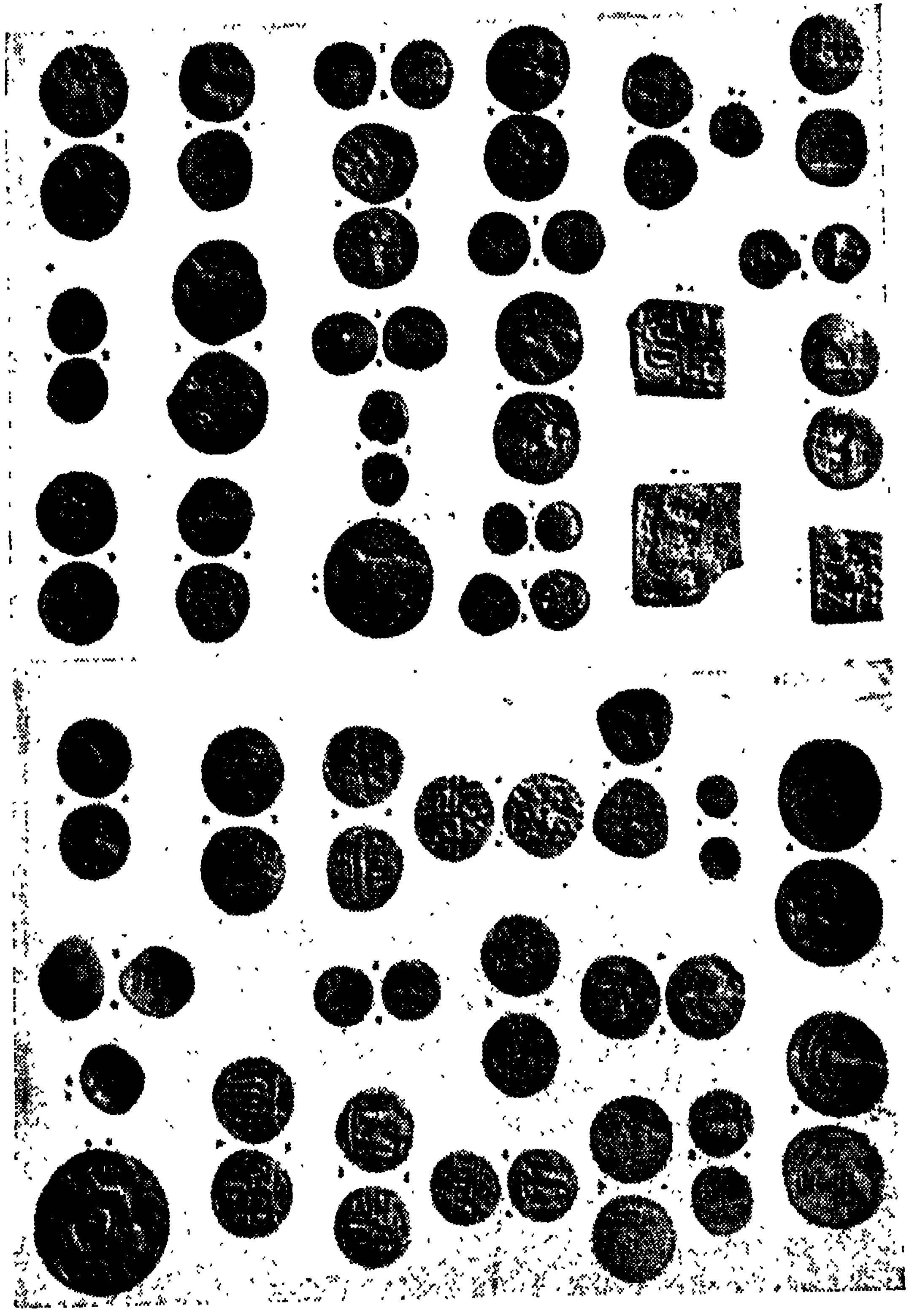

PLATE XXVI

Some of the Coins of this Period.

Copper pieces

Varātaka means a *cowrie*.

Kapardaka : It is the same as *kapadi* as mentioned in the Bihārī inscription and it means a *cowrie*.[1]

Boddika : (copper)—It weighed 11.2 grains. Dr. V. S. Āgrawāla equates it with the old Bengali unit of accounting called *budi* which consists of 5 *gandas* or 20 *cowries*.[2] The term *boddika* (corrupt form of *padika*) means one-fourth. It was equal to one-fourth of a copper *pana*.

Kāgeni or *kākani* : Its value was 20 *cowries*. Hence it was equal to a copper *boddika* and 4 *kākanis* made one copper *pana*.

Pana : It weighed about 45 grains and was equal to 4 *boddikas* or *kākanis*. Hence it was equal to 80 *cowries*.

Panchiyak-dramma : It weighed 56 grains and was equal to 5 *boddikas* or 100 *cowries*.

Vigrahapāla-dramma : It weighed 67.2 grains, and was equal to 6 *boddikas* or 120 *cowries*.

Sadboddika : As the name suggests, it was equal to 6 *boddikas* or 120 *cowries* and was the equivalent of the *vigrahapāla-dramma*.

Gadyāna or *gadhaiya* : It was equal to the two coins mentioned just above, viz., *vigrahapāla-dramma* and *sadboddika*.

Silver currency

Boddika (silver) : According to Cunningham, it was one fourth of a *purāna* and was equal to 4 *panas*.

Purāna = *kāhana* = *kārshāpana* = 16 copper *panas*.

Gold coins

Srimadādivarāha-dramma : It weighed 63 grains. Its value was about that of a *kalanju* or *hun* or *varāha* which we find in circulation in the South.

As we have already noticed, gold and silver coins were very few during this period. Excepting in some of the outlying provinces like Kashmīr, for five hundred years after the fall of the Gupta Empire, we come across very few coins of gold in the whole of Hindustān. Stein's finding is that "the cowrie was from early times used as a monetary token in Kashmīr as elsewhere in India.[1] He further observes "gold and silver could not have formed in Hindu times an important part of the coined currency in Kashmir."[2] The *Minhāj* states that when the Muslims came to Bengal for the first time, they observed that there was no silver currency in the country. They found the people using cowries in economic transactions.

---

[1] R. D. Banerjee, *Memoirs of Archæological Survey*, No. 23 (Haihayas of Tripura), p. 114.

[2] *Agni Purāna*, Chapter CCXXIII, 23-24

The case of the Deccan which had a few gold mines appears to have been different. In that region transactions were carried on through barter or some gold coins—*suvarna, kalanju. gadyānaka* and *kāsu*—were used in very small numbers. The only exceptional silver coin was the *dramma* which is the Sanskritised form of the Greek term *drachme* weighing about 60 grains.

Suvarna : The theoretical weight of a *suvarna* was 146 grains. But no *suvarna* coin of this period weighing 146 grains has been discovered.

Gadyānaka (gold) : Its weight was 96 grains or ½ tola.

Kalanju (gold) : It weighed 15 grains and was equal to the Chola *kāsu.*

Hun (gold) : *Varāha* (50-60 grains).

Panam (gold) : It weighed 5 to 6 grains.

Dr. D. R. Bhandarkar has pointed out that the Nāsik cave inscription No. 12 shows that the ratio between the prices of silver and gold was 1 : 14 during this period.[3] According to inscription Nos. 4 and 5 of the Tanjore temple, the ratio between gold and silver was 1 : 14. The *Sukranīti* gives the ratio as 1 : 16.[4] The ratio between copper and silver during this period was 1 : 3 according to Altekar.[5] The value of a *kāsu* was that of about $1\frac{1}{10}$ tolas of silver, that of a *kalanju* about 3½ tolas of silver, and that of a *gadyānaka* about 7 tolas of silver.

Money-lending

"The old legal rates of interest, laid down by Vasishtha at 15 per cent per annum had ceased to be binding and the usage had outgrown even the somewhat flexible rules of later *Smriti* texts."[6] According to

---

[1] *Rājatarangini*, pp. 88-89, quoting Manu VII, 130 and Vishu, III, 408.

[2] *Indian Antiquary*, VI, 56.

[3] *Carmichael Lectures*, 1921, p. 191.

[4] *Sukranīti*, IV, 2, 98.

[5] *The Rāshtrakūtas and their Times*, p. 355.

[6] *The History and Culture of the Indian People*, Vol. IV, p. 406.

Medhātithi, if the money-lender has been reduced to poverty and the debtor has grown opulent with the wealth earned from the borrowed grain, the interest shall be five times the principal, but otherwise it shall be only four times the same.[1] Even where the creditor has no reason to believe that the debtor is about to carry on an extensive business with the capital lent, he may take the maximum rate of 5 per cent per month irrespective of the debtor's caste and of the articles lent.[2] The original rule that the debt should be considered as paid when double the original amount was received by way of interest[3] was more honoured by breach than by conformity.

The approved rate of interest in the Chola country was apparently 12½ per cent. It was actually 1/8 *kāsu* per year for each *kāsu*, or 6 *kurunis* of paddy for each *kāsu* per year.[4] An inscription from Tiruvarrūr in the Chingleput district mentions that the village assembly of of Kāttūr had agreed to pay in perpetuity an interest of 15%.[5] In some regions, however, much higher rates prevailed. A Bāna inscription dated 915 A. D.[6] states that the interest on 20 *kalanjus* was to be 5 *kalanjus* (25%). Cases in which interest at much higher rates were paid during this period have also been discovered. The rates of interest figuring in the examples given in the *Līlāvati* by Bhaskarāchārya vary from 36 to 50%.[7] Medhātithi mentions that in some regions grains were lent out in spring and double the quantity realised in autumn.[8]

Merchants sometimes proved dishonest in their dealings with their depositors. Kalhana, the author of *Rājataringini*, mentions such a case. A man deposited 100,000 *dinnāras* with a merchant. During a period of twenty or thirty years, he used to draw small amounts for his expenditure. Finally, when he asked for the return of the balance, the merchant rendered a false account and made a counter claim for the excess amount paid by him. The same author writes : "A merchant in a law-suit relating to the embezzlement of a deposit is more to be dreaded than a tiger, because he shows a face smooth as oil, uses his voice but very little and shows a gentle appearance."[9]

---

[1] On Manu, VIII, 151.

[2] Ibid., 152.

[3] Ibid, 151.

[4] *South Indian Inscriptions*, Vol. II, Introduction, p. 19.

[5] *Inscriptions from Madras Presidency*, Chingleput, No. 1048.

[6] *Epigraphia Indica*, XI, p. 224.

[7] Verses 92 and 94.

[8] On Manu, VIII, 3.

[9] *Rājataringini*, VIII, 123, 160.

Contrast in Wealth :

From a study of the prevalent wages during this period we learn that the ordinary worker or peasant got the barest minimum necessary to live a short span of life and procreate. On the other hand, the wealth in the royal treasury and the chests of the feudal lords were so great that visitors to India carried stories of India's staggering wealth. The quantity and quality of the costly presents in gold, silver, and jewels offered by Rājarāja I to the Tanjore temple, and the fabulous wealth of Indian temples, described by Muslim writers, specially in connection with Sultān Mahamūd's invasions, bear witness to the vastness of the wealth acquired by the Indian temples like their counterparts in Europe, the Christian churches.

We get a vivid picture of a country-squire in the *Kuttanimatam.* His dress is gaudy and manners showy. He wears long hair with a thick tuft, which is bound with a long-handled and sharp-toothed comb and is done up with a multi-coloured tassel. He wears finger-rings as well as ear-rings of a distinctive sort, and his neck is adorned with golden lace garlands. He wears ornamental shoes, while his clothes have a gold border and are dyed yellow with saffron. He makes his public appearance in the company of a train of retainers. In the huge dancing hall which is crowded with guild-masters, merchants, parasites and gamblers, he sits with his followers on specially provided seats. He is surrounded by five or six armed attendants accustomed to speak freely and bearing a haughty mien. Being conceited, he recites verses incorrectly and intrudes upon the conversation of intelligent people sitting by his side. He seems to enjoy the extravagant praise of his retainers for his knowledge, his song, instrumental music and dramaturgy, his charities and his love of hunting.[1] Such were the riches and manners of the feudal chiefs while the poor labourers and tillers of the soil could not get even one square meal a day.

Land Tenure

Nowhere in Europe or any other part of the world did the feudal lords seize the entire land of the country ; for it was impossible to deprive the whole of the local population of a share in the native soil or its produce. When the barbarians "from Germany and the neighbouring countries poured down upon the Roman Empire and began to form permanent settlements, they made a partition of the lands in the conquered provinces between themselves and the original possessors. The Burgundians and Visigoths took two-thirds of their respective conquests leaving the remainder to the Roman proprietor...The Vandals in Africa, a more ferocious race of plunderers, seized all tha best land leaving the rest to the old proprietors. The Lombards of Italy took a third part of the produce. We cannot discover any mention of a similar arrangement in the laws or history of the Franks. It is, however, clear that they occupied, by public allotment, or individual pillage, a great portion of the lands of France."[1] Similarly, in India the entire land was not given to the feudal lords or other beneficiaries. As it happened in France, a great portion of the lands of India, was appropriated by the ruling and priestly classes by public allotment or individual pillage, or by both.

---

[1] *The History and Culture of the Indian People,* IV, p. 381.

About the tenth century, which marks the end of feudal formation in India, we have several categories of land—fiscal lands (demesne, lands of the crown), *brāhmadeya* lands (benefices to the priestly class), lands granted to temples and charitable institutions, lands assigned to military captains and lands gifted away for the mintenance of queens, princesses, and faithful servants, lands assigned to civil officers and tributary lands.

Fiscal Lands

A large portion of the kingdom was reserved to produce cash income for the Central Government. In theory, the lands so reserved were the property of the public treasury, but, in actual practice, individuals owned pieces of land and paid revenue to the king. Feudalism in India, as in France, feudalized a large portion of the lands in the country. "Yet" as Hallam points out in the case of France, "it would be inaccurate to assert, that the prevalence of the feudal system has been unlimited, in a great part of the country." We may safely say that in France and also in India, "alloidal tenures always subsisted ; and many estates in the empire were of the same description."[2] But the legal theory was "*Nulle terre sans seigneur*". Fiscal lands were under the direct supervision and control of the government. Those who held this category of land paid a part of the yield to the king.

Brāhmadeya Lands

As we have already noticed in the foregoing chapter, these lands were avowedly granted to increase the religious merit of the donors, but, as Hallam rightly points out, "such favours were not conferred without an expectation of some return." Charlemagne elevated "the ecclesiastical order as a counterpoise to that of the nobility."[1] In India the Brāhmanas were used to keep down the masses and also the nobility by using the weapon of superstition ; for religion in those days was the major arm of the coersive force of the state. Such motives can be discerned in Europe as well. The Brāhmana grantees were to pay no taxes to the king, no forced labour, but the villagers had to pay the customary taxes and royalties to the donees and to render them all obedience. The grants were almost irrevokable and were granted in perpetuity. The Brāhmana donees were not content with collecting the revenue of the villages. In virtue of the grant, they got all the waste land of the village which they reclaimed with the wealth which the grant gave to them. Then gradually they began acquiring lands by means fair or foul and managed to own a large part, and sometimes the whole of the endowed villages.

---

[1] Henry Hallam, *View of the State of Europe during the Middle Ages*, p. 72.

[2] Ibid., p. 83.

Grants to Institutions

A large number of grants were made to temples almost on the same terms as governed the gifts to the priestly class. The king derived no revenue from the lands gifted away to temples, *chattras* (inns), Buddhist monasteries and educational institutions like the Nālanda Vihāra. These grants were also irrevokable and made for all time. Religious institutions, vying in greed with the priestly individuals, started owning lands in the endowed villages ultimately becoming the largest estate holders, sometimes, the practical owners of the entire village or villages.

Gifts to Princesses and Queens

The estates given to princesses and queens for their maintenance or as pin money were absolute grants made forthright without any conditions attached to them. The resumption of the village in Kāsi granted to Kosala Dēvi by the ruler of Kosala, Pasenadi, was an unusual act undertaken under extraordinary circumstances. The grantee's husband had been murdered by his son and the princess herself had died of grief. Naturally, when the gifted village passed into the hands of the king Ajātasatru, the murderer of Bimbisāra and the cause for the death (out of grief) of Kosala Dēvi, the original donor cancelled the grant and seized the village. Even that had to be surrendered back under the terms of a treaty. The villages thus granted could have yielded no revenue to the king. These gifts were hereditary.

Feudal Grants

Lands, villages, big areas containing twelve, twenty, seventy, eighty-four and three hundred villages, and extensive countries like the Gangawādi region containing ninety-six thousand villages, which were granted as military fiefs, had to pay a nominal cash fee and the holder was bound to render military service when called upon to do so. It does not appear that the feudal baron or any feudal, chief big or small was bound to render military service only for a limited number of days in the year or was not bound to serve beyond a limited area. The Dāmaras of Kashmīr were led as far as Bengal and the feudal barons of the imperial Guptas and other emperors followed them wherever they went. But we get references to the effect that the feudal nobles did not like long campaigns in distant lands. The income from feudal fiefs was only nominal but almost the entire remuneration of the combatants comprising huge armies was met from them. The military fiefs, in this period became hereditary from father to son, and in the absence of a son, to any other male heir who had to pay the cash fee and render military service.

---

[1] Hallam, p. 82.

Assignments to Civilians

As we have seen in Chapter VI, Kautilya states that a large number of assignments were made to military and civil officers which they could not alienate by sale or mortgage. They were held and enjoyed in lieu of emoluments for their services. Later, civil assignments also became hereditary, the son of a village headman, village accountant, village guard, or village scavenger normally succeeding to his father's post in the village. Many of the offices in towns also became hereditary except those which required special accomplishments. Even such a post was given to a son or a near relative of the deceased incumbent, if he could somehow manage to perform the duties attached to it. Since the assignments were attached to the posts and not to the persons, in rare cases, assignments were passed on to more suitable candidates.

Apart from the village officials, certain other workers of the village also had lands endowed—the potter, the carpenter, the blacksmith, the washerman, the barber, the goldsmith and the musicians of the village, etc. The chief reason for these assignments appears to be the supplementing of the meagre income of these useful craftsmen to prevent them from migrating to towns in search of greater income. All these assignments were attached to the posts or jobs and in most cases they became hereditary in the family, the son performing the function of the father. These assigned lands did not pay any tax to the government.

Thus the entire system of payment of remuneration to public servants and functionaries appears to have been through fiefs, endowments and assignments and the lands yielding revenue to the public treasury seem to have been quite limited. The state did not require much cash revenue because it did not have to pay salaries in coins to its servants. This may be one of the causes for the paucity of coins during this period.

Taxes

Udranga : Dr. Altekar identifies this tax with *bhāgakara* or *bhāga*, the king's share of the produce. Taxes, as we have already seen, were very heavy ; and Sukra permits land tax at 25% to 50% in the case of irrigated lands, but adds that the tax on dry lands should be such that the net produce should be twice the cost of production, the latter term including the government dues as well,[1]

Uparikara has been identified with *bhogakara* or *bhoga*. This tax appears to have been a daily levy on perishable things like vegetables. fruits, etc. They were usually assigned, in practice, to local officers as part of their income.[2]

We know the actual revenue paid by several villages in the Deccan and also the tax paid by a *mattar* of land ; but since we do not know the extent of the villages or the area of a *mattar*, it is not possible to determine the incidence of the land tax in that region. Inscriptions Nos. 4 and 5 engraved in the Rājarājesvara temple at Tanjore give us information about the incidence of taxation. In the case of 5 villages the tax was levied in cash and the rate works out to be 2½ tolas of gold or 35 tolas of silver for a *vēli* (6½ acres) of land yielding two crops a year. In the remaining 30 villages the tax was collected in paddy and the average has been worked out by Hultzsch as about 100 *kalams* for a *vēli*.[3] A *vēli* of land in the Tanjore district yields 200 to 250 *kalams* of paddy for the first crop (*bhogam*) and between 150 to 200 *kalams* of paddy for the second crop. Thus the tax works out to about ¼ of the yield.

Bhutopalotapratyāya (a revenue derived from the elements) was almost universally collected. Dr. Altekar identifies it with *sulka* on the ground that those inscriptions which mention the *sulka* omit this tax and *vice versa*.[4] We are familiar with imposts collected in the name of *bhūtas* and *vāta*. Dr. Altekar groups under this head the tax on clarified butter (ghee) and on charcoal, the right to claim the best bull and she-buffalo mentioned in some of the records of the Vākātakas, the Yādavas and the Cholas, a customs duty of one golden *gadyāna* from every ship arriving from a foreign country and of one silver *dharana* from every one coming from coastal ports collected by the Silāhāras of Konkan,[1] and taxes collected by the Cholas from potters, shepherds, weavers, oilmen. shopkeepers, stall-keepers, brewers and gardeners.[2]

---

[1] *Sukranīti*, IV, 2, 110 ft.

[2] Altekar, *The Rāshtrakūtas and Their Times*, p. 215.

[3] *South Indian Inscriptions*, Vol. II, Introduction, p. 19.

[4] *The Rāshtrakūtas and Their Times*, pp. 228-29.

Miscellaneous Taxes

Miscellaneous taxes comprised tax on house sites, ferry tax, tax on marriage mentioned in some Chola records,[3] on the occasion of celebrating the attainment of puberty[4] and tax at the death of persons dying without a son.[5]

Occasional Exactions

Whenever a military or police force entered a village, which did not possess immunity by a grant, it demanded supplies from the village people and the latter were bound to provide them.

Other Items

In addition to the above-mentioned taxes many of the taxes which we have noticed in the earlier chapters continued to be levied. Fines were levied on several pretexts, and demands made on occasions of festivities like the birth of a son, and marriage of a daughter. Besides, there was income from waste lands and trees on stray plots of land. Income from forests and pastures should have continued as in older days. Mine products and manufacture of salt provided revenue to the state as also treasure-troves.

Conclusion

The growth of feudal elements divided society into two sharpely divided classes—the feudal aristocracy and the common people consisting of peasants, craftsmen, labourers, serfs and slaves. The *Periplus* gives us some idea of the wealth of the rich for whom very costly vessels of silver, plates of gold and silver, singing boys and good-looking girls, fine wines, thin clothing of the finest weaves and the choicest ornaments were brought to the ports of India from abroad. The life of the city-bred man of fashion described with such vividness in Vātsyāyana's *Kāmasūtra* is one of ease and indulgence. The use of perfumes, unguents and other cosmetics appears to have been extensive among the upper classes.

---

[1] *Epigraphia Indica, III*, p. 286.

[2] *South Indian Inscriptions*, III, p. 391.

[3] Ibid., p. 531 (Tandontottam plates).

[4] *Indian Antiquary*, XIX, p. 145.

[5] Ibid.

Moral standards reached a very low ebb. Morality in business, in ordinary social intercourse and in private life was conspicuous by its absence. A passion for war or killing human beings for personal aggrandisement or a false sense of glory was one of the main features of the period. Drinking wine was common among the upper classes. Sexual excesses reached unimaginable proportions supported by the debased Tantric philosophy. If we can believe the records and chronicles of the period, there were cases in which mothers, sisters, daughters and daughters-in-law were not spared. The upper class society became completely depraved and war, wine and women became the principal absorption of the moneyed people.

In contrast to this opulence, ease, comfort and moral depravity on the part of the exploiting class, the humble peasants, craftsmen, labourers, serfs and slaves hardly got enough to keep themselves alive. They were exposed to all kinds of misery—hunger, exposure, sickness, indebtedness, insecurity, loss of honour, and unbearable mental worry. While the aristocrats soared up in the sky, the poor and the low were reduced to the dust and treated as vermin.

The disappearance of slavery and the consequent improvement in production-relations and the status of man marked a clear advance over the earlier periods. Slaves were few and the upper classes were free from the domination of any powerful emperor. Feudalism "diffused the spirit of liberty" in the upper classes, but the bulk of the people "were degraded by servitude. The peace and good order of society were jeopardised" and private wars became common. "And as predominant habits of warfare are totally irreconcilable with those of industry, not merely by the immediate works of destruction, which renders its efforts unavailing, but through that contempt of peaceful occupations which they produce, the feudal system must have been intrinsically adverse to the accumulation of wealth, and the improvement of those arts which mitigate the evils or abridge the labours of mankind."[1] In cases like the Chola empire where enormous wealth got accumulated, the bulk of it was gifted to temples, because a feudal society could not utilize it in productive purposes.

The feudal system was little adapted to the defence of an extensive country like India. As far as the security of India from external attack was concerned, the feudal constitution of the land proved to be highly dangerous. Foreign invaders conquered the land and imposed on the country the rule of a people whose civilization had not yet reached the full feudal stage.

---

[1] Hallam, p. 148.

CHAPTER VIII

CONCLUSION

Palæolithic Implements

Man is known to have been a tool-using animal at least for the last 600,000 years, and from that time onward tools made of imperishable stones carry on the story of man's economic activities across the millennia. Even in very remote antiquity, say a few hundred thousand years ago, man in different parts of the earth appears to have displayed an identical genius and similar skill in his struggle for existence. "At a given period in the Pleistocene one can take, almost without selection, tools from South India, Africa and South England which show identical techniques of manufacture and form, and in all three areas essentially the same evolution can be traced leading up to and developing from these forms and methods of manufacture. Tool making traditions in the Palæolithic have transcontinental distributions ; what happens at one end of the area seems to be happening more or less simultaneously at the other."[1] This remarkable uniformity in the development of human genius did not get disturbed at any later stage. Taking small areas and short spaces of time, one may find certain variations ; but if we halt at significant stages in the history of human economic activities, and cast a glance over the whole world, we find, not only in essence but also in forms, a uniformity which is astounding as well as extremely gratifying to note that mankind is one, with identical genius for evolution and that its independent progress in different parts of this globe has been uniform and the pace of advance almost even.

Archæological excavations in India have been unsatisfactory in many respects. More undertakings are necessary for a fuller study. Yet from the scanty material that bas been excavated we are in a position to understand that the Indian human genius kept pace with the rest of the world through all the stages of savagery, barbarism and civilization.

The Bow and Arrow

The bow and arrow were discovered about 35,000 years ago and we see this complicated machine of the savage period being used in most parts of the world in the same age. It was not necessary, nor could it have been possible in all cases, that this implement should have been copied by one people from another. Borrowing there could have been in many cases ; but it need not have been the case everywhere. When the economic progress of a people reaches a certain stage, most of the equipments necessary for that stage are acquired by the human genius with or without borrowing from one another.

---

[1] Piggott, p. 24.

Pottery

In Kashmīr, at the 'megalithic' site of Bursahom, we come across cord-marked sherds common to Siberia and elsewhere in Eastern and South-Eastern Asia. De Terra considers the date of this ware to be very early. Allied pottery in China is estimated to have been as early as 5,000 B. C. The potter's wheel appears to have been discovered about 2,500 B. C. About the same time we find this great invention being used in India. Further, the equal pace of Indian development with the surrounding and even far-off areas is demonstrated by the discovery of a large number of allied pottery. The Quetta ware is comparable to Tall-i Bakun, Sūsa I, Giyan V, Sialk III, Khuzistān, Tall-i-Ghazīr and in certain respect to far-flung Jarmo. Similarly, the buff ware found in village excavations around Quetta is found in many other parts of the Middle East, once more stressing the similarity in the development.

Agriculture

Domestication of animals and the practice of agriculture commenced about 5,000 B. C. Almost about the same time animals were domesticated in India and rice cultivation undertaken, wheat coming in thereafter from the West. Rice cultivation was passed on by India to China through the Yangtze.[1]

Smelting

India was a bit late in smelting copper, but it caught up with the rest of the civilized world with a remarkable speed ; and the copper mirror of Mehi (see page 20) is a marvel among the articles of the copper age. Within a thousand years after the first man smelted metal, the art became common throughout the world. Different countries might have borrowed the technique from one another, but the more important factor is the uniform advance of humanity which made identical technique possible. In our own days the Americans harnessed the atomic energy and kept the technique a secret ; but within a decade the

---

[1] N. S. Vavilov, *The Origin, Variation, Immunity and Breeding of Cultivated Plants* (English translation by K. S. Chester), p. 29.

U. S. S. R. was able to master it and also harness a new power, the hydrogen energy. Within years the Americans produced the new energy as well. The U. S. S. R. shot up an artificial satellite ; the Americans could do the same within a short time. The U. S. S. R. sent up Yuri Gagarin orbiting round the earth. The Americans have just now sent a man on a similar errand. Borrowing is not required. What is essential is the technical advance of a people. Astonishingly enough mankind in different parts of the globe has progressed with an even pace throughout the ages.

Harappan Culture

During the Harappan period we see a city culture with private property springing up in the valleys of the Indus, the Nile and the rivers of Mesopotamia. Not only a city culture was common but also the use of inscribed seals, beads, a few types of tools and several other objects of an economic import suggesting that all these areas had been evolving with an equal pace during the one million years of man's struggle with Nature to extract from her womb the means of sustenance and comfort. Although we see a slight advance of the Indus people over those of Egypt and Sumer in certain details (use of the saw, candle-stick, cotton and a highly developed drainage system), in many respects the cultures were the same—use of burnt bricks, a textile industry, drilling of hard stones for beads, metallurgy, a system of weights and measures, careful and controlled town-planning and the use of a script.

Iron Implements:

The use of iron in large quantities is said to have come into vogue about 1,400 B. C. From that time, may be a few centuries later, this valuable metal was in use on a fairly large scale in South India. Later, the same part of India led the world in the art of metallurgy by producing the famous crucible steel, known by the word *wootz,* which was common to Tamil, Telegu and Malayālam. The steel of South India, and especially swords made of it, became famous all over the Middle East. India had been keeping pace with the rest of world, sometimes slightly lagging behind and soon overtaking and surpassing other advanced countries, which, in their turn, caught up with and outstripped her. On the whole the race was equal.

Religion

When private property was firmly established and consolidated, there arose empires to support private wealth and also big religions to sanctify it and provide a moral, religious and philosophical structure based on property-relations. In the 6th century B. C. the phenomenon was common to the great basins of the Ganges, the Yellow River, the Euphrates and the Nile.

While the Buddha laid down certain rules for the lay disciples to guard private property and ordained that no servant should aspire for more than what he is given, K'ung Fu-tsu (551-472 B. C.) advised the subordinate rulers of the empire to suppress their overweening ambitions as well as furnish their quota of imperial service and counselled every man to occupy his appointed place. "The appointment of a new ruler, he described as the 'receiving of Heaven's decree', every subject of the state must therefore accept his ordered place, and every member of the family, in like manner, must fulfil his part with loyal submission. There must be no contrariety in the home or in the state ; no trespass beyond the appointed limits, no disruption of the social harmony."[1] In Babylonia, the prophetic literature which was taking shape during the captivity of the Jews in that country (587-539 B. C.), especially the story of Moses, laid down, "Thou shalt not steal." The Hebrew religious and moral superstucture based on private property sprang up during this period of Jewish captivity.[2] Similarly, we see in Egypt a property-ridden philosophy and ethics arising about the same time.

The old production-relations having given place to new ones, a new economic base had been formed and to cover that new base an entirely fresh superstructure was required—a property-ridden religion, morality and philosophy with laws and regulations to protect private property and smoothen the course of exploitation by oppressing and suppressing the exploited masses and curbing, a little, the exploiters lest the milch cows should be bled to death, causing an end to the very profitable process of exploitation.

The division of a classless society into two antagonistic classes —the exploiters and the exploited—necessitated the birth of the state to moderate the class struggle and facilitate the process of exploitation. When private property was firmly established and bigger estates were created out of the smaller ones, there arose big empires by conquering smaller kingdoms.

Slavery

With the emergence of private property was born the institution of slavery, and from the origin of private property to its consolidation was the period of slavery when slave labour was employed on a large scale. In a primitive society what a man could produce was just enough for himself, his wife and children ; and in that society there was no room for slaves ; for a slave could not produce enough to support himself and be substantially profitable to his master. With the domestication of animals, a labourer acquired a surplus value. An additional hand meant augmentation of the possessor's wealth. Further, agriculture coming upon the heels of domestication of animals, the slave could be made a means to create wealth for the master without becoming dangerous. Moreover, agriculture being more settled than hunting and herding, there was less possibility of the slave escaping ; for he was always under the eye of his owner or the latter's people.

---

[1] James, *Encyclopaedia of Religion and Ethics*, Vol. IV, p. 18.

[2] H. G. Wells, *The Outline of History*, in IV volumes (London), Vol. I, p. 161.

The writers of the Rigveda, as we have already noticed, sang in exhuberance the great happiness and pleasure that the slaves gave to the owners. Wars provided a large number of slaves. Other means were devised to increase the number of these wealth-producing machines. Indebted craftsmen, ruined peasants and insolvent merchants were forced into slavery. Women slaves not only produced wealth for their masters and rendered domestic services, but also became providers of satisfaction for their masters' lust.

With the consolidation of private property all over the advanced parts of the world like India, China, Mesopotamia, Egypt, and the Mediterranean seacoast about the 5th century B. C., slaves constituted the chief labour force. Swarms of slaves were employed in large estates under scourging supervisers who knew no ruth or relent. This institution, horrid and repulsive, was employed by all the nations of the world in their struggle for existence, supremacy and accumulation of wealth at a particular stage of economic development.

Its Decline

After reaching the extreme stage of slave exploitation, the pendulum swings back. The growth of feudal elements and the decay of the institution of slavery begin almost simultaneously. When feudalism gets established in India, Europe and several other advanced regions about the end of the 10th century A. D., slavery as a vital means of producing wealth takes a downward course in these regions. What was the order of the day a few centuries ago becomes a thing out-of-date. Slavery did exist even in a feudal society, but slaves did not form the chief labour force. Slaves were more and more eliminated from land as labourers both in India and in Europe. Mostly they were possessed and employed to render personal services or to do menial domestic jobs.

Currency

In pre-historic India cattle were used as currency when the need for it arose. The same was the case with the Romans, and there are indications to show that the same commodity passed on as currency among the Greeks as well. That the need for a currency should have arisen almost simultaneously in different parts of the world and that the same commodity should have been employed as the medium is one more proof of the uniformity of human genius and the pace of man's economic development. Further, with the passing away of a pastoral civilization, when the need for some more convenient medium and the necessity for small change arose, we see coins being minted almost at the same time (8th century) in Asia Minor as well as in China, each country undertaking the task independently of the other.

Feudalism

Until very recently it was maintained by historians of India that feudalism did not appear on the Indian soil, that the historical development in India did not follow the pattern discovered by Karl Marx in Europe and other countries. The orthodox scholars either did not know what feudalism was, or they closed their eyes to the unwelcome fact. May be that they were not interested in reducing divine India to the level of mundane Europe or any other country. Some of the scholars, who knew the facts in broad outline, did not like to follow up the tract lest the unpleasant Marxist truth should emerge out. Many Marxists believed, rather vaguely, that India could not have escaped feudalism, but with an inexplicable docility yielded to the repeated suggestion by the orthodox camp that in many particulars the Indian development was different. They easily conceded that in India there was no subinfeudation and no feudal hierarchy, as there were in Europe, that the Indian caste system was peerless and that no part of the world ever possessed a unit like the Indian village, self-sufficient, self-governing, independent and unique.

A few years' study has convinced me that there is no essential difference, from the economic or social point of view, between European feudalism and the one that prevailed in India and that most of the Indian social institutions like unequal value being assigned to the lives of different classes, absence of inter-marriage and inter-dining between them and even a form of untouchability were in vogue in the European continent.

All the economic aspects of European feudalism I have enumerated and under each head collected and submitted Indian data to prove the existence of identical institutions. Grants in Europe were made to the church, to warriors and to princes and assignments were given to civil officers. All these types of grants we find in this subcontinent. Further, the institution of granting land for religious and charitable purposes which are known in Europe, are common in this country. Commendation, immunity, forced labour, feudal fees and certain special taxes and occasional demands including the levy of benevolences, are all found here as in Europe.

Feudal Hierarchy and Subinfeudation

We find in our great country a large number of rungs constituting the feudal hierarchical ladder from the king to the *thakkura*. The myth that India never had a feudal hierarchy has been, I hope, exploded in this work. There was the king at the top. He had great nobles immediately under him. These, in their turn, had vassals and sub-vassals holding lands of their immediate superiors. The hierarchy was seven or more stages deep. Cases of inferred and explicit subinfeudation are found in a sufficiently large number to warrant that, as in all feudal societies, the Indian society of the 10th century also had an established institution of subinfeudation not very much different from the European type.

From my point of view, the essence of feudalism lay in the alienation of land and its inhabitants by the king to a superior class standing in a specially favoured relation with him and in creating a special production-relation on land which affected the entire economic base which in turn necessitated a particular social superstructure. A feudal hierarchy and subinfeudation do not constitute essential economic features of feudalism. They are mere accidents. Imagining that India is a wonderful land different from others, many scholars have asserted that these two features are essential to feudalism and that they are absent from the Indian feudal society. Fortunately, I have found ample evidence to establish that these, not very essential economic elements, were also present in the Indian feudal system.

Social Aspects

As regards the value fixed for the lives of different classes of people in India, Āpastamba writes that the punishment for killing a Brāhmana is death and for killing a Kshatriya a fine of one thousand cows. If a man killed a Vaisya, he was to be fined one hundred cows and for killing a Sudra the punishment was a fine of ten cows. Concerning a similar difference in the value of the lives of persons belonging to the different classes of people in Europe, Henry Hallam writes, "The weregild was paid to the relations of the slain, according to a legal rate. This was fixed by the Salic law at six hundred solidi for an Antrustion of the king : and at three hundred for a Roman *conviva regis* (a man of sufficient rank to be admitted to the royal table) ; at two hundred for a common Frank ; at one hundred for a Roman possessor of lands ; and at forty-five for a tributary or cultivator of another's property."[1]

Further, we learn that no plebeian could possess a fief ; that a gentleman in France or Germany could not exercise any trade without derogating, that is, losing the advantages of his rank ; that no children could inherit a territory held immediately of the empire, unless both their parents belonged to the higher class of nobility ; that in France the offspring of a gentleman by a plebeian mother could not be received into any order of chivalry ; and that they were not considered as any better than a bastard class deeply tainted with the alloy of their maternal extraction. "In nothing does the feudal haughtiness of birth more show itself than in the disgrace which attended unequal marriages."[2] Certainly there were exceptions. Several emperors belonging to higher strata married persons coming of lower ones. Such exceptions were not uncommon in India.

"The tenure of the villeins bound them to what were called villein services, ignoble in their nature, and indeterminate in their degrees ; the felling of timber, the carrying of manure, the repairing of roads for their lords, who seem to have possessed an equally unbounded right over their labour and its fruits"[3] They were without any legal redress, if injured by the lord.[4]

We have examples of inter-marriages between *varnas.* Not only high caste males have married low caste females but there are cases to prove marriages in the other direction also. "Prabhāvati Gupta, daughter of Chandragupta II, married Rudrasena of the Brāhmana Vākātaka dynasty. Daughters of Kākusthavarman of the Brāhmana Kadamba dynasty were married to Gupta and other non-Brāhmana kings.[5] The Brāhmana named Soma, who was the ancestor of the minister of the Vākātaka king Dēvasena, married Kshatriya wives also. "Lokanātha, whose maternal ancestor was a Brāhmana, begot a son by a Sūdra wife. The daughter of Harsha of Thāneswar, belonging to a Vaisya family, married the Kshatriya king of Valabhī. Bāna's father married a Sūdra wife by whom he had two sons. In contemporary Sanskrit dramas and prose romances we find Brāhmanas and Kshatriyas marrying even the daughters and female slaves of courtesans. The story of a Brāhmana lady named Chārudutta marrying Vasantasena and that of another Brāhmana lady, Sarvilaka, marrying her slave, Madanika, are found in the *Mrichchhakatika*. We also find the story of a prince marrying the younger daughter of a courtesan of Champā in the *Dasakumāracharita*. Such marriages are approved by the *Kāmasūtra*."[1]

---

[1] Henry Hallam, *View of the State of Europe during the Middle Ages* (London), p. 74.

[2] Ibid., p. 99.

[3] Ibid., 104.

[4] Ibid.

[5] *Epigraphia Indica*, VIII, 24.

Even the essence of caste system I have found in the Europe of this period. A serf's son remained a serf, the peasant's son a peasant and a warrior's son mostly followed his father's profession. If there were Christian monks and nuns in Europe, in India we had many Buddhists belonging to the same categories in addition to a very large number of Hindus spending their lives under a vow of celibacy. The astonishing thing is that these castes were as exclusive in the Europe of the period as in India.

There were cases in Europe in which the general rule of following the father's profession was broken. Such departures from the strict *Smriti* law have been reported in India as well. There are a number of instances of Brāhmanas and Kshatriyas adopting the occupations of the classes below them and of Vaisyas and Sūdras following those of the classes above them. Māuryasarman, a Brāhmana, deliberately chose the profession of a Kshatriya and eventually became the founder of the Kadamba dynasty. There were a large number of Brāhmana rulers. Mahārāja Mātrivishnu was the great-grandson of the Brāhmana saint Indravishnu.[2] Brāhmana kings ruled at Ujjayini, Jihoti and Mahēshvarapura when Huan Tsang visited India. The *mahāsāmanta* Pradoshasarman was descended from strictly orthodox Chāhmāna ancestors.[3] Huan Tsang mentions Vaisya kings of Thāneswar and Paryatra and Sūdra kings of Matipura and Sind. An inscription[4] of the fifth century A. D. refers to two Kshatriya merchants living in a city in the upper-Ganga basin, while another inscription[5] of the same century mentions a body of weavers form Gujarāt as having gradually adopted various other occupations in their new home at Mālwa. In the seventh century Huan Tsang and his companions, escaping from a band of robbers in the Takka country, met a Brāhmana, who was ploughing the land with his own hands.[6] In the *Dasakumāracharita*,[7] a contemporary prose romance, we hear even of a colony of Brāhmana robbers living by the occupation of *kiratas* in the Vindhya forests.

The word 'caste' was coined by the Portuguese to denote the

---

[1] *History and Culture of the Indian People*, Vol. VI, p. 553.

[2] Fleet, III, 89.

[3] *Epigraphia Indica*, XIV, 309 seqq.

[4] Fleet, III, 70-71.

[5] Ibid, III, 81-84.

[6] Beal, p. 73 (1931 edn).

[7] Ibid., p. 26.

varnas and their sub-divisions, and since then it has acquired the distinction of importing an inflexible rigidity to the *varna* boundaries. "There was plenty of pride of birth, which made intermarriage and eating together between certain ranks an act more or less disgraceful to those reckoning themselves as socially higher. And sons, especially perhaps among artisans, tended to follow the paternal industry. This was all."[1] On the other hand, "a great many passages from both the Jātaka and other canonical books might be quoted to show that the four 'colours' are on the whole to be taken in no stricter sense than we speak of 'lords and commons', 'noblesse, eglise, tiers-etat', 'upper, middle, lower classes.'[2]

Village

As for the Indian village there was nothing very special about it. The most striking aspects of the Indian village are, a self-sufficient local economy, units of peasant property, the open field system, the regulated use of commons, and a community life. All these features were found in the feudal village of Europe as well. *The Cambridge Economic History of Europe* states : "As households increased and more land was brought under the plough, whilst all lived together in the same village, it was not the natural thing to give one heir all his land near the dwelling houses, and another all his in a remote newly cultivated part of the fields ; symmetrical results were achieved by giving each his share of old and new land. The resultant dismemberment of property made the peasants highly dependent on one another for any improvement or regulation of agriculture ; and so grew up the familiar handling of village economy on a communal basis which was associated with the open field system down to modern times. The law of Ine Wessex (circa A. D. 700) which strengthened the obligation of the villagers to assist in the fencing of corn and hay fields points towards the beginning of village growth and the development of the open field. The growth of village population and the breaking up of the shares in property necessitated the regulation of common duties and their enforcement by fines. The village community, which had developed spontaneously, enforced its economic discipline itself. The fact of its being organised affected the whole area. It led to the fixing of the boundaries of the various communities....The villages had always used land, not required for the plough, as pasture ; and the forest round about the utilized land had supplied them with timber and pannage. These customs of user, with those of water, came under communal control, and the rights of the various proprietors were determined by the community. But by no means all waste land belonged to communes and was divided between them. From the beginning privileged property had privileged claims on such areas."[1]

---

[1] *The Cambridge History of India*, Vol. I, p. 187.

[2] Ibid., p. 186.

Thus it will be seen that all the so-called special features of the Indian village were present in the village of Europe as well. From the inscriptions of Rājarāja, the Chola ruler, we gather that the following parts of a village were communal : the village site, the village tank and its banks, the portion occupied by the artisans, washermen, toddy-drawers, and Pariahs, the burning ground of the high caste Hindus and that of the Pariahs, the irrigation channels, temples, shrines, ponds in the middle of fields, flower-gardens, streams, rivers, high-roads, the stone-fence for cattle, the stables, the village threshing floor, grazing ground for calves, wells and cisterns.[2]

We can easily see that there is no feature of an important economic character which makes any institution of India quite different from a corresponding one in Europe or any other advanced country of the world. There is nothing unique in the caste system or the village community of India which makes the course of economic history of this land unique or quite different from that of other countries. From the very inception of human life, mankind, in its struggle for existence, has evolved, step by step, in an almost uniform way. The advance towards the attainment of more and more economic comforts and advantages could not have been straight and uniform like soldiers marching in serried ranks. It was certainly zig-zag with ups and downs. In many countries it was wave-like. Yet, when we halt at significant stages, separated by long distances of time, we find that mankind—the advanced sections of it—reached those significant stages almost simultaneously and that the economic life at all those significant stages was similar in all essential aspects. India was no exception to the general rule. There can be no pride in our claiming to be different from others and in shutting our eyes to those hard facts which show us that we are only a part, a very useful part, of the great community of mankind and not different or separated from it.

This country of ours shared all the good and bad institutions with the rest of the world—savagery and barbarism in the remote past, slavery and ruthless exploitation at a later stage and feudalism during the Middle Ages. By the end of the ninth century we have in India all the feudal institutions that we find in Europe and in many other parts of the world. .

---

[1] *Cambridge Economic History of Europe.* Vol. I, pp. 40-41.

[2] *South Indian Inscriptions,* Vol. II, Introduction.

As we have seen in the preceding chapter, the feudal system was not conducive to the defence of the land against better organised adjacent states which still lingered at an earlier level in the same stage of civilization. Not very long after the feudal formation was completed, invaders from the North attacked India and conquered it. The country was in the feudal stage, but the new rulers were still in a slightly lower level. The slaves whom the foreigners brought could not be used to cultivate the land because a complete reversal of the economic progress was not possible. Hence, those who were hewers of wood and drawers of water in their own land became members of a military aristocracy in India.

The history of feudal economy will form the subject of our study in the next volume.

INDEX

A

Abhidhāna Ratnamāla, 216, 217.
abhijna, 223.
Ablūr, 202.
Abū Zayd, 221, 228.
āchārya, 223.
Achæmenian, 87, 107, 135.
ādakam, 129.
adandkarāni, 156, 164.
ādhaka, 130.
adhyaksha, 121.
Ādiparvan, 140.
Ādisimha, 212.
ādya, 164.
Afghānistān, 40, 131, 178, 181.
Africa, 1, 8, 92, 237, 243.
Āgrawāla, (Dr. V. S), 233.
Agni Purāna, 219, 220.
Agronomoi, 100.
Ahmadābād, 40.
Ahichchhatra, 79.
Aihole, 201.
Aitareya Brāhmana, 167.
aiyan, 121.
Ajanta, 177.
Ajas, 67.
Ajātasatru, 77-79, 136, 140, 161, 238.
Ajitamana, 212.
Ajmer, 40, 231.
Allchin (Dr.), 21.
Alexander the Great, 49, 98, 109, 120, 187, 2140.
Alexander Serverus, 184, 216.
Alexandria, 132, 141, 185 187.
Alhanadēvi, 195.
Allāhābād, 173.
Allan (John), 137.
Altekar, (Dr.), 227,228, 234, 238.
Amara, 178.
Amarakosa, 171, 172, 178.
Ambattha Sutta, 156.
America, 133.
Ammarāja I Vishnuvardhāna, 196.
Amri, 11, 12, 18, 22-24.
Anantapāla, 202.
Anantavarman, 200.
Anāthapindika, 95.
Anatolia, 16.
Āndhra/s, 97, 98, 109, 110, 141, 189, 193, 214.
Āndhra Desa, 12, 16, 110, 120.
Anga, 139, 175, 181.
Angira/s, 67.
angua/s, 130, 131.
Anjanavana, 102.
antirāpana, 129.
Antioch, 132.
Antonova (K. A.), 152, 197, 208,.
Antrustion, 249.
āpana, 129.
Aparājitadēva, 202, 203.
Aparānta, 120.
Āpastamba, 74, 153.
Apologos, 141.
Ar-abia, 132, 133, 141, 182, 216.
Arab/s, 43, 54, 60, 140, 141, 215, 217, 222 228-230.
ārākku, 223, 224.
Ārang, 157.
aratni/s, 130.
Arian, 189.
arisi, 133.
Aristobulus, 101.
Arjuna, 140.
arjuna, 172.
Arrian, 115, 120, 145.
arivan, 121.
Arthasāstra, 93, 102, 110, 119, 120, 125, 142, 147, 153-156, 162, 164.
Aruvālār, 161.
Arya (cultivator), 52.
Aryan/s, 44-55, 57, 58, 60, 61, 63 65, 67, 68-71, 73, 75, 78, 80, 81, 83, 84, 97, 175.
Arya Samghas, 160.
asavārika, 207.
ashmavraja, 51.
Asia, 16, 131, 185, 244.
Asia Minor, 66, 80.
Asmaka, 83.

Asoka, 101, 112, 113, 137, 149, 150, 193.
Assam, 16, 131.
Assurbanipal, 87.
Assyrian, 135.
Asuras, 48.
asvamedha, 191.
Asvatthāmā, 140.
Atharvaveda 87.
Athenæus, 132.
atithya, 160.
Atkūr, 210.
Augustus, 132, 183, 184, 216.
aurei, 189.
avalagaka, 212.
avalgana, 166, 212.
Avamukta/s,
Avanti, 89.
Avantivarman, 230.
avoghana, 178.
Awad, 230.
ayas, 84, 87.
āyodhīya, 162, 214.
Azes, 214.
Azilises, 214.

B

Baba Budden Hills, 81.
Babylon, 31, 87, 132, 185.
Babylonia, 48, 246.
Babylonian, 135.
Bacare, 132, 141.
Bactria, 185, 187, 188.
Bactrian/s, 98, 114, 131, 187, 189, 193, 214.
Badakhshān, 40.
Bāgenād,
Baghelkhand, 204, 208.
Bahāwalpur, 11.
Bāigrām, 191.
Bāi Māmi, 206.
Bāi Rūpāi, 206.
bali, 88, 145, 156, 167.
bali hrit, 88.
Balūchistān, 10, 17, 19, 23, 30, 36, 40, 42, 63, 83, 84.
Bāmiyān, 185.
Bana, 235, 250.
Banda, 63.
Bandhuvarman, 180.
bandhya, 172.
Bankeya, 205.
Barābar, 200.
Barbara, 131.
Bareily, 79.
Bārhut, 129, 177.
Barygaza, 134, 183, 185.
Basrah, 229.
Bāveru, 132.
Behishtūn, 107.
Bellari, 21.
Belvola, 210.
Benares, 96, 120, 128, 129.
Bengal, 16, 40, 120, 137, 141, 158, 229, 234, 239.
Benganapalli, 6.
beqa, 41.
bhāga, 142, 240.
bhāgakara, 142, 240.
Bhāgalpur, 139.
Bhandagama, 128.
Bhandara, 83.
Bhandarkar D.R. (Dr.), 234.
Bhanja/s, 205, 209.
Bharata, 178.
Bharukachcha, 128, 134.
Bhāskarācharya, 235.
Bhatāraka, 201, 204.
Bhattasvāmi, 153.
Bhattisūra, 201, 205.
Bhillama II, 194.
Bhillas, 213.
Bhīlsa, 22.
Bhīma I, 196.
Bhīmanāyaka, 197.
Bhīr Mound, 78, 104, 105, 109, 110, 140.
Bhishma, 71, 140.
Bhītā, 106.
Bhītargāon, 175.
Bhītarī, 157.
bhoga, 213, 240.
Bhogadevarāja, 202.
bhogakara, 206-208, 240.
bhogapatika, 163.
bhogika' 163.
bhogikapāla, 163.
bhogikāpati, 163.
Bhojas, 90.
Bhramarasālmali, 212.
bhūtas, 167.
Bhūtayya, 209.
bhūtopalotapi atyāya, 240.
Bhūtuga, 209, 210.
Bible, 61.
Bihār, 36, 47, 78, 89, 139, 181, 230.
Bihārī, 233.
Bilāspur.
Billa Surgam, 6, 8.
Bimbisāra, 136, 157, 161, 238.
Bithur.
Black Sea, 15.
boddika, 233.
Boghāz-Koi, 46.
Bohtlingk, 212n.
Bombay, 22, 36.
Bonai, 205.
Bose, N.K., 4.
brahmachārin, 227.
brāhmadeya, 160, 164, 166, 237.
Brahmagiri, 21, 81, 109.
Brāhmanapallika.

Brahmapuri, 108, 109.
Brāhmi, 119, 120.
Bride (the), 222.
Brihadāranyaka Upanishad, 74.
Brihadratha, 193.
Brihaspati, 93, 123, 153, 163, 171, 223.
Brihatsambitā, 169.
Brinjāras, 128.
British Museum, 231.
Broach, 128, 134, 141.
Buddha, 70, 89, 93, 98, 112, 114, 246.
Buddhagosha, 166.
budi, 233.
Buhler (Dr.), 207.
Bulandī Bāgh, 107.
Bulandshahr, 47.
Bundelkhand, 231.
Burgundians, 236.
Burma, 16, 40, 128, 131, 228.
Burn, R., 230.
Bursahom, 241.
Byzantine, 133, 132, 184, 216.
Byzantium, 184.

C

Calendar-Brahmin, 50.
Calliena, 182.
Cambay, 228.
Cambodia, 228.
Campania, 187.
Cana, 141.
Cape Comorin, 132.
Caracalla, 133.
Cardi (Miss de), 79.
Carlton Coon, 1n, 2n, 14n.
Carlyle, 81.
Carmenia, 183.
Carolingian, 215.
Caucaso-Persian, 57.
Caucasus, 57.
Central Asia, 40, 46, 98, 181, 185, 230.
Central Deccan, 21.
Ceylon, 70, 129, 131, 133, 141, 182, 183, 185, 197.
Chāhmanas, 251.
Chaitya, 96, 112, 176.
Chakrabāni, 219.
Chakradharpur, 178.
Chakrapalita, 178.
Chaldæans, 131.
Chālukya, 197, 202, 210, 219, 230.
Chammak, 156, 153, 164, 167.
Chamara dear, 229.
Champā, 128, 197, 210, 251.
Chānakya, 180.
Chandanadāsa, 180.
Chandela, 231.
Chandere, 128.
Chandra, 179.
Chandragupta I, 98, 100, 160, 193.
Chandragupta II, 160, 178, 179, 191, 215, 250.
chāndrakānta, 179.
Chandrarāja, 195.
Chandravalli, 109.
Chang-kien, 131.
Chanhu-dāro, 22, 32, 33, 42.
Charlemagne, 237.
Charmanka, 158.
chāru, 156.
Chārudatta, 250.
chattra (inn), 238.
Chattradhāra, 195, 197.
Chauhān, 231.
Chedi, 205, 231.
Chembrolu, 195, 197.
Chēra, 84, 89, 90, 97, 98, 169, 173, 182, 183, 231.
Chester (K.S.), 16n, 69n. 244n.
Chhāndas, 46.
Chhattīsgarh, 231.
Chhingala, 212.
Chilappathikāram, 179.
Childe (V.G.), see Gordon.
China, 6, 16, 65, 69, 92, 131, 134, 141, 182, 185, 193, 216, 228, 229, 244, 247, 248, 253.
Chinabhūmi, 120.
Chingleput, 235.
Chitaldrūg, 21, 164.
Chola, 92, 97, 98, 141, 182, 195, 197, 210, 231, 235, 241.
chora, 142.
Chou-kou-tien, 6.
Christ, 92, 157, 165.
Christian, 120, 134, 183, 184, 189, 235.
Chryse Island, 134, 185.
Chunāmput, 235.
Cochin China, 16.
Coimbatore, 81, 184.
conviva regis, 249.
Coorg, 81.
Coptic, 61.
Coromandel, 141, 189.
Cosmos Indicopleustes, 229.
Cottonara, 171.
Courtallam, 16n.
Cowrie, 136, 239.
Cranganore, 141.
Crete, 42.
Ctesias, 81, 84.
Cunningham, 139, 191, 233.
Cuttack, 201.

Dacca, 228.
Dāhir, 222.
Dāmara/s, 203, 213, 239.
Damascus, 182.
Damba Koh, 83.

Damirke, 134, 141.
Dāmodarpur, 158, 180.
danda/s, 130.
dandanāyaka, 202.
Dange (S.A.), 50.
Darbhakaksha, 195.
Dardistān, 115, 178.
daric, 135.
Darius, 115.
Darius Hystaspes, 135.
Das (G.N.), 4n.
dasa, 210.
Dasakumaracharita, 251.
Dasapura, 204.
dāsis, 210.
Dasyu, 52.
Dawlatābād, 128.
dayāda, 74.
Daybul, 220, 228.
Delhi, 231.
demesne, 200.
deodara, 172.
desa, 223.
de Cardi, (Miss), 79.
De Terra, 244.
deva adiyāl/s, 210.
Devagiri, 195, 201, 205.
Devanagarī, 137.
Devasatra, 51.
Devasena, 250.
Dhādiadeva, 202.
Dhādibhamdaka, 202.
Dhandhuka, 195.
dhanus, 131.
dharana/s, 130, 136, 241.
Dharanivarāha, 201.
dharma, 71, 149.
Dharmapāla Dēva, 204.
Dharma Sāstra/s, 74.
Dharma Sūtra/s, 74.
dharna, 135.
Dharasena I, 168, 201, 204.
Dharasena II, 168, 211.
Dhārwār, 201.
Dhurva, 196, 204.
Dhurvasena, 167.
Dhurvasena III, 168.
Digest, 184.
Dīgha Nikāya, 157, 162.
Dilipa, 173.
dīnārs, 228.
dinnāras, 255.
Dio Chrysostom, 132.
dirghika, 172.
Divyāvadāna, 168.
drachme, 234.
dramma, 225.
Dravidians, 81, 83.
Drona 71.
drona, 53.
drona/s (measure), 130.
Dronasena, 204.
duhitā, 51.
Drujjuru, 196.
Durvasena I, 208.
Duryodhana, 104.
Dutt, R.C., 86.
Dvaitavana, 104.
dvāradeya, 143.

E

East Africa, 87, 140.
Eastern Chālukya, 196, 206.
Eastern Europe, 80.
Eastern Rājputāna, 204.
Eastern U. P. 204.
Egypt, 31, 39, 41, 42, 44, 66, 92, 100, 141,
  183, 245-247, 251, 253.
Ehrich (R. W.) 12n.
ekka, 140.
Elam, 41.
Engels (Frederick), 1, 69.
England (South), 18, 207.
Ereyappa, 209.
Ethiopia, 142, 187.
Euphretes, 91 246.
Europe, 1, 125, 134, 159, 165 182, 185,
  207-211, 215, 236, 247-249.
Eyinar, 102.

F

Fa-hsien, 169, 182.
Farīdpur, 158.
Fay (W), 154n.
Fayzābād, 230.
Forbes (R. G.), 85.
France, 207, 237, 250.
Francis, 70n.
Frank/s, 237, 249.
Frederick Engels, see Engels.
Further India, 124.

G

gabarband, 17.
gadhaiya, 233.
gadyāna, 241.
gadyānaka, 127, 233, 234, 244.
gana, 49-51, 66, 71.
Ganapati, 195, 197, 221.
gandas, 233.
gandakas, 120.
Gandhara, 89, 128.
Ganeshgarh, 167.
Ganga/s, 196, 203, 204, 209.
Gangawādi, 196, 203, 204, 239.
Gangaya Dēva, 231.
Gange, 115, 120, 134.
Ganges (R.), 91, 115, 120, 128, 137, 183,
  246.
Ganjam, 197, 229.

Gāonri, 196.
Garh-kalika, 83, 116.
Garulaka, 205.
Gatti, 83.
Gaul, 65.
Gautama. 74, 86, 88, 145.
Gautamiputra Sātakarni, 165.
gāvunda/s, 205, 206, 209.
Gaya, 128.
Gayakarnadeva, 195.
Geldner, 57.
George Watt, 16.
Germany, 132, 207, 236, 250.
ghatika, 130.
Ghirshman, 80n.
Gilgit, 185.
Girnār, 150, 161.
Giyan V, 244.
Goa, 182.
Godāvari, 4, 22, 69.
godhuma, 75.
Gokanāyaka, 197.
gopa/s, 161.
Gopāl (Dr M. H.), 123, 124.
Gopala, 206.
gopālaka, 102.
Gordon (D. H), 4, 7, 24, 79, 82.
Gordon Childe (V), 29, 52n. 80n.
goruta, 131.
gosha, 103.
Goths, 216.
Govatika, 195, 197.
Govinda II, 196.
Govinda III, 196.
Govindarāja, 195.
Græco-Bactrian, 176.
gramabhritaka, 153.
grāma/s, 98.
grāmani, 197.
grāmika, 124..
Greece, 65, 66, 115.
Greek/s, 30, 50, 51, 65, 66, 89, 99, 104, 109, 121, 133, 135, 141, 176, 178, 185, 187, 189, 193, 214, 217, 234, 248,
Griha Sūtras, 78.
Guardafui, 141.
Gujarāt, 24, 40, 102, 104, 134, 196, 204, 251.
Gujira, 228.
Gulf of Mannār, 183.
gunja, 130
Guptas, 154, 156, 158, 160, 161, 165, 172, 177, 189-192, 193, 201, 203, 204, 208, 209, 213, 215, 229, 230, 234, 239, 250.
Gurjara-Pratīhāra, 209, 228.

H

Haihaya, 231.
Haimondorf, (Dr. C. Von Furer), 83.
halirākara, 167.
Hallam (Henry), 237, 249.
Harappā, 19, 20, 23, 24, 26, 28-31, 33, 35, 37, 41, 42.
Harappans, 19-33, 35-37, 39-48, 52-55, 57, 58, 61, 69, 79, 245.
haritipanya, 153.
Harsha (of Kashmīr), 211, 250
Harshavardhāna, 201, 203, 219 230.
Harishena, 198.
hastis, 130, 121.
hastipravartinam, 143.
Hastin, 157, 174.
Hastināpura, 182.
Hastivarman, 199
Hatthigāma, 128.
Hazārībāgh, 166.
Hazār Mardī, 83.
Hebrew, 61, 246.
Hellenistic, 109, 110, 114, 177.
Hemmy, A.S., 41, 130.
Herakles, 189.
Herodotus, 66, 87, 115, 135.
Himalayas, 171.
Himalayan region, 175.
hīna-sippa/s, 122.
Hindukush, 185.
Hindustān, 230, 233.
Hippalus, 141.
Hīrāpur, 40.
Hittites, 55, 80, 135.
Hiuen Tsiang, see Huang Tsang.
Hobbes, 166.
Hopkins, 73.
Hormuz, 33.
Hossanadi, 196.
Huang-che, 131, 185.
Huang Tsang, 160, 162, 175, 210, 217, 229, 251.
Hultzsch, 225.
hun, 231, 233, 234.
Hunas, 191, 216, 229, 230.
Hunt, 84.
Hutton, 48.
Hyderābād, 128.

I

Ibn al-Faqih, 228.
Ibn Hawqal, 220.
Ibn Khurdādhbih, 228.
Ibn Rustah, 228.
Ilandriyan, 182.
inchiver, 133.
Indian Ocean, 141.
Indo-Bactrian, 164, 187.
Indo-China, 229.
Indo-European, 54, 60.
Indo-Greek, 119, 140.
Indonesia, 229.
Indo-Scythian, 139, 189, 230.
Indra, 46, 75, 196.
Indravishnu, 251.

Ine Wessex, 251.
ingudi, 172, 182.
Īrān, 24.
irina, 217.
Īsānakūpa, 195.
Īsānavarman, 230.
Īsvara, 207.
Īsvaravāsaka, 160.
Italian, 185, 187.
I-tsing, 160.

J

Jabalpur, 231.
Jaina, 187.
Jajakabhukti, 231.
jāla, 85.
Janakas, 94.
Jangada, 116.
Jarmo, 244.
jaritila, 216.
Jātaka/s, 94, 97, 110, 112, 125, 132, 252.
jāti, 223.
Jatila Parāntaka, 202.
Jauli pattala, 195.
Jāva, 110.
Jaya, 195, 197.
Jayana, 195, 197.
Jayanātha, 157.
Jayasimha, 202, 211.
Jayavarman, 204.
Jetavana, 102.
Jettahaka, 125.
Jew/s, 246.
Jhalwān, 17.
Jhukar, 55, 57-59.
Jihoti, 251.
Jīwanri, 83.
Johiyabar, 199
John Allan, 137.
Jumna (R.), 48, 128, 137.
Justinian, 184.
Kabra Pahār, 7.
kadai, 178.

K

Kadamba/s, 212, 213, 230, 250, 251.
Kadaram, 183.
Kadūr, 81.
kāgeni, 233.
kāhana, 233.
kahāpana, 124.
Kāhun in Egypt, 31.
Kajulakāra, 189.
kākani, 233.
kākanika/s, 120, 136.
Kākatīya, 195, 197.
kakubha, 172.
Kākusthavarman, 250.
kala/s, 131.
Kalachuri 209.
kalam, 223-227, 240.
kalama, 172.
kalanju, 231, 233, 234.
Kālēpār, 11, 12.
Kalhana, 211, 235.
Kālidāsa, 171-175, 178-181.
Kalinga, 90, 101, 120, 150, 174, 181.
Kalyāna, 128, 182.
kamaka, 217.
Kamandi, 196.
Kāmarūpa, 175, 181, 228.
Kāmarūpī, 228.
Kāmasūtra, 211, 241, 251.
Kamsa, 136.
Kanara, 230.
Kānchi, 131, 185.
Kānchipuram, 131, 219.
Kane (Dr.), 197.
Kanhapallika, 195,
kanjūr, 104.
kapadi, 233.
kapardaka, 233.
Kapilavastu, 128.
kāpim, 61.
Kapisa, 185.
kara, 142, 167.
Karāchi, 21.
Karaigi, 201.
karanju, 223, 224.
Kardakhatta, 195.
Karikāla the Great, 161.
kaiīsas, 160.
Karkkarāja Suvarnavarsa, 194.
Kārli, 96, 112.
Karl Marx, see Marx.
Karna, 71.
karpion, 133.
kārsha, 130, 136, 140.
kārshāpana, 233.
Kartalai, 157.
Karūr, 101.
kāru silpin , 121.
karuva, 133.
karuvēmbu,
Karuyadungi, 178.
Kāshgar, 185.
Kashmīr, 81, 185, 194, 203, 203, 206, 213, 215, 219, 233, 234, 239, 244.
kashtha/s, 131.
Kāsi, 161, 238.
kāsu, 223, 225, 227, 234.
Kathiawār, 22, 204.
Kattakūpa, 195.
Kāttūr, 235.
Kātyāyana, 158, 185, 223.
Kausāmbi, 120.
Kausheya, 120.
Kautilya, 120, 125, 146, 147, 149, 150, 158, 160-162, 165, 167, 174, 192, 222, 239.
Kāvēri (R.), 69, 171, 183.
kāvi, 61.

Kāviripattinam, 101, 182.
Kāvyamīmāmsa, 216, 228.
Kechi Beg, 18.
Kēlawādi, 202.
Kērala, 131, 173.
Kesava, 207.
khala-bhiksha, 213.
Khālimpur, 204.
Khanauj, 213, 231.
khanitrimā āpah, 53.
Khānumāta, 157.
Kharagpur Hills, 4.
Khāravela, 150.
Kharia Hills,
Kharoshthi, 214.
Khasi, 16.
Khemer, 16, 228.
kheya, I72.
khetri, 40.
Khoh, 157, 159, 174.
Khurab, 46.
Khurāsān, 40.
Khūzistān, 244.
kichaka, 131.
ki-chok, 131.
kilichchirai, 129.
Kinsukad, 210.
kiratas, 251.
Kīrtivarman, 205.
Kiselyov, (Ś.), 4n, 5n.
Kizwadana, 80.
klipta, 158.
klripta, 145.
Kohbār, 104.
Kokkalla I, 209.
Kol, 16.
Kolhāpur, 164.
Kolikupāra, 195.
Kolkoi, 132.
Kongoda, 229.
Konkon, 120, 241.
Korkai, 132, 182, 183.
kosahāra, 216.
Kosala, 89, 161, 192, 238.
Kosala Devi, 161, 238.
Kosāmbi, 96, 128.
koshtagara, 127.
Kotala, 213.
Koteyūr, 210.
Kottanādu, 179.
Kottayam, 179.
Krishna (R.), 4, 69.
Krishna II, 204.
Krishna III, 209.
krosa, 131.
krishnala, 87, 140.
Kshaharata/s, 214.
Kshatrapa/s, 177, 214.
Kudumba/s, 130.
kula/s, 50.
Kula (a measure of land), 163.
Kullam, 228.
Kulli, (capital), 10, 12, 17, 21, 24, 25, 44, 61.
kulya, 58.
Kumāragupta I, 180, 121.
Kumāragupta II, 191.
kumbha/s, 130.
Kumrahar, 110.
Kundrukochcha, 178.
K'ung Fu-tsu, 246.
kūpa, 172.
kurba, 182.
Kurnool, 6.
Kurukshetra, 51, 79.
kuruni, 223, 224, 227.
kusala, 223.
Kushāna/s, 98, 137, 177, 178, 185, 189, 191, 193, 214, 215.
kusida. 86.
kusidin, 86.
Kusunāra, 128.
Kūtadanta, 157.
kuttanimatam, 236.
kutumbin/s, 153, 206, 207.

L

Laodicaean,185, 187.
Laodicia, 229.
laksha, 174.
Lakshmana, 217, 218.
Lāl (B. B.), 47.
Lalitāditya, 213.
Langhnaj, 12.
Lanka, 89, 127.
Las Bēla, 10.
liksha/s, 130.
Lilāvati, 235.
lodhra, 172.
Lohichcha, 157.
Lohichcha Sutta, 156.
Lokanātha, 250.
Lombards, 237.
Londo ware, 79.
Lūristān, 57, 80.
Lydia, 66, 135.

M

Macedonian/s, 121, 214.
Mackay, 33, 31, 34, 59.
Madanika, 250.
Madhipur, 139.
Madhuka, 172.
Madhunadi (R.) 158.
Madhura, 4, 120.
Madoura, 132.
Madras, 185, 223-225.
Madura, 101, 108, 117, 119-121, 129, 131, 181, 184.
Madurai, 131, 181.
Maduraik Kānchi, 101, 119.

Magadha, 89, 106, 120, 128, 139, 157, 161, 192, 212.
Mahābhārata, 70, 71, 79, 90, 145, 150, 163.
mahābhojals, 164, 208.
Mahādeo Hills, 7.
Mahājanapadas, 80.
Mahā-Jayarāja, 157.
Mahākala, 196.
Mahākosala, 231.
mahāmandalesvara, 202, 203, 208.
mahāmandalesvarādhipati, 203, 207, 208.
Mahānadi (R.), 81.
mahānāyaka, 207.
mahārāja, 201, 204, 206, 209.
Mahārājadhirāja, 200.
mahārānaka, 205, 207, 208.
Mahārāshtra, 2.
mahārathis, 164, 208.
mahāsāmanta, 291-205, 207-209.
mahāsāmantādhipati, 201-204 207.209.
mahāsāmantamahārāja, 201, 203, 208.
Mahasthān, 120.
Mahā-Sudevarāja, 157.
mahāvagga, 139.
Mahāvamsa, 70, 89.
Mahāvīra, 98.
Mahendrapāla, 201, 204.
Mahendrapāla II, 203.
Mahēshwar, 22.
Maheshvarapura, 250.
Mahisha, 120.
Mahissati, 128.
Mahmūd (Sultān), 235.
Maitland (F.W.), 154.
Maitraka, 230.
Majhgawām, 157.
Majumdār (R. C.), 18.
Makarapātaka, 195.
Makrān, 17, 46.
Malabār, 16, 131.
Mālavas, 120.
Malaya, 140, 141.
Malayālam, 245.
Malindapanha, 169, 171.
Malkhēd, 196, 209.
Malladatta, 224.
Mālvas, 204.
Mālwa, 150, 196, 207, 221, 219.
Māmallapuram, 132, 176, 219.
mana, 87.
Manalarata, 210.
mandalapti, 209.
mandalesvara, 203, 208.
māndalika, 203, 206.
Mandasor, 180.
Mangalam, 81.
Mānikpur, 63.
Manipur, 47.
manjadi, 231.
Manu, 95, 92, 123, 136, 140, 145, 173.
Manu Dharma Sāstra, 93, 161, 163.
marakkal, 223, 224.
mārāya, 163.
mārgānka, 213.
mārgāyuga, 155.
Mārkinda, 128.
Marshall, 106, 116, 119.
maru, 217.
Marudan, 129.
Marx, (Karl) 49, 50, 248.
māsaka, 136.
māsha, 134.
Mas'ūdī, 228.
Masulipatam, 128.
Mathanadēva, 213.
Matilda, 203.
Matipura, 251.
Mātrivishnu,251.
Matsya, 104.
Matsya Purāna, 173.
mattar, 240.
Matura, 201.
Maukharis, 191, 200, 201, 204, 230.
maula, 197.
Mauryas/s, 98, 100, 120, 129, 139, 140, 150, 154, 155, 175, 187, 192, 193, 215.
mawsim, 141.
Max Muller, 46.
Mayūrapadra, 195.
Mayūrasarman, 251.
Mayūrbhanj, 81 178.
mayuta, 218.
Medhātithi, 215, 216, 222, 223, 234, 235.
Mediterranean, 65, 66, 132, 185, 247.
Megasthenes, 86, 95, 100, 114, 122, 133, 140, 149, 150, 151, 153, 155.
Mehi, 4, 17, 19-21, 24, 44, 244.
Mehrauli, 179.
Menander, 189, 214.
meridarkhs, 164.
Mesopotamia, 16, 24, 30, 31, 40, 41, 49, 92, 244, 247.
Middle East, 245.
Minhāj, 234.
Mīrpur Khāss, 175.
Mirzāpur, 10.
Mitāni, 46, 80.
Mithilā, 129, 161.
moha, 71.
Mohenjo-dāro, 23-26, 28-32, 35-37, 39-43, 46, 48.
Mommsen, 134.
Mongait, 4n., 5n.
Monghyr, 4.
Morgan, 1.
Moses, 246.
Mrichchhhakatika, 171.
mritsna, 217.
Mudalis, 161.
Mudrārākshasa, 180.

Muga Pakkha Jātaka, 125.
Mugheir, 131.
Mughul Ghundai, 83.
Muhammadans, 229.
muhurta/s, 131.
mula, 145.
Munda/s, 47, 187.
Musiri, 141.
Muziris, 141.
Myos Hormos, 132, 141.
Mysore, 35, 40, 81, 131, 189, 196, 203, 209, 230.

N

Nabhūtishandaka, 212.
nādus, 90.
nadvala, 217.
Nāga/s, 73, 98.
Nāgāditya, 202.
nagaras, 98.
Nāgarī, 112, 231.
nāgavanādhyaksha, 103.
Nāgpur, 83.
Nal, 10, 12.
Nālā, 106.
Nālanda, 157.
Nālanda Vihāra, 162, 217-238.
nal-gāvunda, 205-209.
nālika/s, 131.
nameru, 172.
Namundi, 195.
Nanda, 192.
Nandi, 130.
Nandibhāga, 137.
Nandyāl, 6.
Nārada, 99, 123, 153, 172.
Narasing, 206.
Narasinghagupta.
Nārāyanavarman, 204.
nāri, 223, 224.
Narmadā (R.), 4, 81, 195.
Nārwār, 231.
Nāsatyas, 46.
Nāsik, 108, 109, 191, 234.
Nathapāna, 181.
Natural History, 133.
Navagrāma, 197.
Navalakhi, 168.
nāyaka, 206-208, 210.
Nearchus, 49, 115, 119-21, 178.
Nearer East, 135.
Nebuchadnezzār, 131.
Nedunālvādai, 175.
Nelcynda, 132.
Nepāl, 120.
Nero, 133, 134, 184.
Nevasa, 79.
Niain, 10, 12.
Nicolaus, 132.
nigama/s, 129.
Nile (R.), 91, 92, 141, 245, 246.
Nīlgiris, 40.
nimesha/s, 131.
Nirbhayanarendra, 201.
Nīrkunram, 132.
Nirmand, 209.
Nishādas, 67.
nirvāna, 66.
nīvāra, 172.
Nivartana, 831.
nīvidharma, 158.
North Kanara, 164, 189.
Nundāra, 17, 18, 21.

O

Ocelis, 141.
Ohind, 201, 231.
Old World, 134.
Ommana, 141.
Ophīr, 61.
Orissa, 16, 36, 81, 116, 137.
Orza,, 133.

P

pada/s, 130, 136.
Pādadāsa, 209.
padakku, 223, 224.
padi, 223, 224.
Padirruppāttu, 174.
Padiyūr, 133n.
padma tankās, 230.
Pahārpur, 180.
Pahlavas (Parthians), 164, 187.
Paithan, 128.
Pākistān (West), 16, 83.
Palas, 154.
pala/s, 130, 228.
palam, 223, 224.
Pāli, 156.
Palitāna, 168.
Palk Strait, 183.
Pallava/s, 219.
palli/s, 98.
Palmyra, 132.
pana, 233.
panam, 231, 234.
Panchānan Mitra, 6n.
Panchiyak-dramma, 233.
Pandae, 132.
Pandion, 132.
Pāndya/s, 70, 89, 90, 97, 98, 108, 117, 120, 182, 197, 202.
Pānini, 76.
Panis, 48.
Pan-ku, 185.
Parākramabāhu, 197.
Paramāras, 154.
Parāntaka I, 195, 197.
parasu, 57.
Pardi, 168.

paridesa/s, 131.
parihāraka, 162.
parjanya, 57.
Parthian/s, 193.
Paryatra, 251.
Pasenadi, 156, 157, 161, 162, 238.
Pātaliputra (Pataliputta), 106, 107, 110, 128, 150.
Patitthana, 128.
Pattabaddhaka, 195.
Pattakadal, 219.
Patrorna 120.
Paundra (Paundraka), 131.
Pauskarasadi, 157.
Pāva, 128.
Pavrajaka/s, 204, 208.
Pavrajaka—mahārāja/s, 208.
Payalipaltana, 196.
Pāyāsi, 162.
Perīplus, 102, 104, 115, 120, 134, 171.
Permanandi, 209.
Persia, 16, 40, 42, 66, 98, 107, 131, 135, 182, 229.
Persian/s, 63, 65, 83, 135, 187, 189, 214.
Persian Gulf, 33, 83, 140, 181, 183, 185, 187.
Persica, 81
Petra, 132.
Piggott (Stuart), 4, 24, 53, 63.
Piklihal, 21.
pindakara, 145.
Pishtāpura, 199.
Pithāpuram, 199
Pliny, 132-134, 141, 183, 216.
Ponnāni, 132.
Portuguese, 251.
Prabhāvati Gupta, 250.
pradhāna vyāpārinah, 182.
Pradoshasarman, 251.
pramukha, 125.
pranya, 142, 167.
prastha/s, 131.
prasthaka, 213.
Pravarasena II, 156, 157.
priti, 142.
prushamedha, 85.
pryangu, 172.
Przewalski's horse, 63.
Ptolemy, 120, 183.
Ptolemy Philadelphus, 132.
Ptolemy Philopater, 132.
Puhār, 132, 182, 183.
Pukkusāti, 89.
Puliyar, 176.
Pundra, 120, 216.
Punjāb, 57, 69, 79, 114, 176, 181, 191, 193, 214.
pur, 67.
purohita, 156.
Puragupta, 215.
Purānas, 78, 196, 238.
purāna/s (coins), 214.
Puranānūru, 175, 185.
Purigere, 210.
Purochana, 140.
Pūrvadēsa, 229.
Pūshan, 60.
Pushyagupta, 150.
Pushyamitra, 193.

Quetta, 12, 18, 21, 244.
Quilon, 171.
Quintus Curtius, 214.
qurfah, 133.

Rachamalla, 210.
Raghu, 180.
Raghuvamsa, 173, 178, 180, 181.
Rājāditya, 209.
Rahma, 228.
Rāichūr, 21.
Rāipur, 217.
Rajagaha, 128.
Rājagriha, 78, 96, 102, 136.
Rājanpur, 57.
Rājarāja I, 220, 221, 236, 253.
Rājarājēsvara, 226, 240.
Rājasimha, 193.
rājasuya, 89.
Rājataringini, 209, 230, 235.
rāja-vaidehaka, 127.
rajju/s (measure) 131.
rajju (tax), 142.
Rajor, 213.
Rājput, 130.
Rājputāna, 36, 40, 112.
Rāmadēva, 197, 206, 210.
Rāmāyana, 70.
Rāna Ghundāi, 18, 42.
ranaka, 202, 203, 205,-210.
Rangadih, 178.
Rangoon, 128.
Rangpur, 12, 22.
ranku, 197.
Rashtrakūta/s, 196, 202, 203, 205-209.
rāshtrakūta/s (in the general sense) 206. 207.
rathin, 124.
Rāthor, 231.
rati, 87, 130.
Rattarāja, 203.
Rāypur, 157.
Red Sea, 132, 141, 187.
Revananāyaka, 197, 210.
Rhys Davids (Mr.), 92, 128.
Ridgeway, 63.
Rigveda, 46, 51, 53, 57, 58, 60, 61, 63, 67, 75, 80, 135, 246.

rishis, 48.
ritvik, 156.
Rohasena, 178.
Roman/s, 37, 99, 119, 120, 132-134, 141, 182-185, 187, 189, 214, 216, 236, 237, 247, 249.
Roman Senate, 133, 184.
Rome, 132, 133, 180, 184, 189, 216.
Rūdbār, 83.
Rudrabhūti, 211.
Rudradatta, 209.
Rudradāman, (Saka Mahākshatrapa) 150, 161.
Rudrasena, 250.
Ruhmi, 228.
Rummindei, 114.
rūpā, 139.
Rupār, 24, 79.
ruru, 174.

S

Sabarmati, 4, 69.
Sabeanism, 189.
sadboddika, 233.
sādvala, 217.
Sahājati, 128.
Saisunāga, see Sīsunāga.
Saka/s, 164, 176, 177, 189, 193, 214.
Saketa, 102.
sakulyā/s, 74.
Sakuntala, 178, 182.
sāla. 175.
Salavatika, 157.
Salem, 81.
sāli.(rice), 171, 216.
Salic Law, 249.
Saliyūr, 182.
sallaki, 172.
Salt Range, 181.
samāja/s, 149.
sāmanta/s, 163, 200-208.
sāmanta chūdāmanih, 200.
sāmantadeva, 201, 207, 208.
sāmantamahārāja, 201, 203, 207, 208.
samara, 228.
samavritti, 130
sambunātham, 129.
Samgha/s, 76, 132, 169, 223.
samita, 51.
Samkaranaka, 195.
Samudragupta, 157, 173, 174, 200, 215.
Sānchi, 160, 173, 177.
Sangam, see Tamil Sangam.
Sanganakllu, 21.
Sanghbhūm, 178.
Sankaravarma, 230.
Sankhāyana Srauta Sūtra, 74.
Sankalia, 78.
Sankisa, 114.
Sanskrit, 197, 250.
Santals, 47.
Sāntivarman, 201, 205.
sapinda/s, 74.
saptaparna, 172.
Sarahakotta, 195.
Sarala, 172.
sarisa, 172.
Sarma (R.S.), 163.
Sārnāth, 112-114, 176.
Sarvanātha, 157, 159.
Sarvavarman, 230.
sarvavishti, 211.
Sarvilaka, 250.
Sāsanian, 229.
Sātakarni, 165.
Satapatha Brāhmana, 85, 86.
Satara, 136, 165, 167.
Sātavāhana/s, 98, 110, 126. 161, 164, 165, 177, 180, 182, 208, 214.
sathavāha,
Satpura Range, 183.
S*atra Yajna*, 50.
Satrubhanja, 205, 209.
satrūpam, 129.
sattra, 156, 195.
Sāvatthi, 96, 128.
Schoff, W. F., 134n.
Scythian, 137, 189, 214.
Scytho-Parthian, 164.
Sea of China, 131.
sēnāpati, 201, 204, 205.
sēr/s, 130, 226.
sesterces, 180.
Setavya, 128, 162.
setushu. 163.
sevidu, 223, 224.
Shadanga kratu, 50.
Shah Bellaul, 40.
Shāhī Tump, 46, 57.
Shalmaneser III, 131.
shakel, 135.
Sialk, 80, 244.
Siberia, 133n., 241.
siglos, 135, 136.
Sigrus. 67.
Sikkim, 16.
sikshaka, 223.
Silāditya I, 168.
Silāhāra/s, 202, 203, 241.
Silberrad, 63.
Simhāditya, 201, 205.
Simhagoshtha, 195.
simhanika, 145.
Simharāja, 195-197.
Simhavarman, 204.
Sinanthropus Pekinensis, 6.
Sind, 17, 18, 24, 39, 42, 84, 140, 228, 251.
Sindhu, 30.
sindon, 30.
Sindura, 131.

Singhalese, 70.
Singhanpur, 7.
Sircar (Dr. D. C.), 209.
Sirkap, 106, 107.
Sirpur, 217, 218.
sīsam, 229.
Sīsūnāga, 78, 81.
sīti, 147 155.
Sītābaldī, 202.
Siva, 195, 196.
Sivakaradeva, 205.
Sivalik Hills, 1.
Sivapithecus, 1.
Sivi, 110.
Siwani, 154, 167.
Siyādoni, 201.
skanda, 53.
Skandagupta, 157, 191, 215.
skandhaka, 213.
Slater, 48.
Smriti, 153, 154, 217, 233, 251.
Smith (V. A.), 114.
Soan (Sohan), 4.
Solomon, 61, 87.
soma, 250.
Somali, 140.
Somavamsi, 201.
Somēsvara I, 202.
Sop, 81.
Sophāra (Sopāra), 61, 228.
Sophīr, 61.
South Arabia, 87.
South England, 92, 243.
South Russia, 57, 63.
Sovīra, 128.
Spooner (Dr.), 107, 110.
Srāvasti, 102, 106. 131.
sreni, 125, 222, 223.
sreshthins, 111.
Sridhantamana, 212.
srimadādivarāha-dramma, 633.
srotriya, 156.
Stamba, 196.
Starr (R.F.S.) 25n.
Stephen, 203.
Stein, 11, 233.
sthanik/s, 161.
Strabo, 114-117, 121, 130, 141, 147, 150, 187.
strategoi, 164.
Subba Rao, 3. 4.
Sudakshina, 173.
Sudarsana, 150, 172.
Sukra, 143, 145, 147, 240.
Sukranīti, 234.
Sulaymān (Tājir), 221, 228.
sulka, 143, 145, 240.
Sulla, 133.
Sultān Mahmūd, 236.
Sultānpur, 136.
Sumatra, 110.
Sumer, 25, 38, 41, 42, 44, 57, 245.
Sunga/s, 98, 114, 193.
Sūrāshtra, 220.
Sūrat, 168.
sūryakānta, 179.
Susa I, 244.
Sūta-Māgadhas, 67.
Sutlej, 79.
Sutra/s, 75, 76, 84, 85, 87, 88, 134, 135.
Sūtrakāras, 85.
svāmin, 154.
svāmyam, 153, 155.
suvarna, 136, 234.
Suvarnabhūmi, 128.
Suvarnakudya, 120.
Suvarnavarsa, 194.
suyam, 168.
swastika, 55.
Syria, 187.

tadāga, 172.
tādī, 180.
tagara, 171.
Taittiriya Brāhmana, 76, 85, 86.
Takka country, 251.
Talavargika, 200, 203.
Talcher, 205.
Tall-i-Bakum, 244.
Tall-i-Ghazīr, 244.
Tāmaraparani (R.), 69.
Tamil/s, 61, 83, 89, 90, 97, 102, 106, 107, 110, 112, 117, 119, 120, 133, 135, 143, 175, 178, 181, 182, 185, 245.
Tamilakam, 134, 141.
Tamil Nād, 12, 16, 35, 61, 81, 102, 128 133, 134, 141, 147, 168, 179, 180, 184, 185, 194, 209, 245.
Tamil Sangam, 70, 132, 173.
Tāmralipti, 128, 212, 229.
Tāmranagri, 195, 197.
Tāmranāla, 106.
Tāmrapura, 197.
Tanjore, 220, 223, 225, 226, 234, 236, 240.
Tantric philosophy, 242.
Tarafah, 219.
Tarim, 185.
Taxila, 78, 104, 106, 109-111, 116, 118, 119, 138, 140, 187, 214.
Tekkali, 205, 209.
Telugu, 84, 245.
Ter, 128.
thakkura/s, 206, 208, 249.
thalaniyyamaka, 126.
Thāna, 557.
Thānēswar, 250, 251.
Thuton, 128.
Tibetan, 115, 166.
tilaka, 172.

Tilpat, 79.
Tiruppadium, 228.
Tiruvalluvar, 98.
Tiruvarrūr, 235.
Togan, 18, 21.
tokai, 61.
tolals, 130.
Tomara, 231.
Traikalakāka, 195.
Trikundapura, 202, 204.
tsin-tung, 131.
tukim, 61.
Tunkupāra, 195.
Turkistān, 182, 229.
Turk/s, 63.
Tushāspha, 150.
Tyndis, 132.
Tyre, 185.

U

udakabhāgam, 143.
udanga, 167.
Udayamana, 212.
udranga, 240.
ugrals, 74.
Ujeni, Ujjaini, (Ujjayini) Ujjain, 83, 108, 119, 128, 251.
Ukkal, 227.
Ukkata, 157.
Ulavar (ulavan), 102, 121.
Umān, 141.
Undabhata, 201.
Upādhyāva, 172.
upaklipta, 158.
Upalabada, 197; 210.
Upāli, 139.
Upamitibhavaprapanchākatha, 213, 216.
Upanishad/s, 75.
uparika, 207.
uparikara, 167, 240.
Upper Burma, 185.
Ur, 31.
urakku, 223, 224.
Uro, 84.
ur-gāvunda, 206, 207, 208.
uri, 223, 224.
urvara, 217.
urz, 133.
Ushavadāta, 181.
'*ushr*, 145.
U. S. S. R., 16, 69, 245, 246.
Uttaramerūr, 195.
Uttara Panchāla, 129.
Uttarapātha, 228.
Uttar Pradesh, 63, 71.

V

Vadamadurai, 4.
vaha, 130.
vaidehakals, 121, 153.
vaidurya, 133, 220.
Vaidya (C. U.), 145.
Vaigai (R.), 69.
Vaikkarai, 132, 141.
Vainyagupta, 209.
Vajira, 161.
Vajrahasta, 196.
Vajrahasta III, 197.
Vajsaneyi Samhitā, 85.
Vākātaka/s, 240, 250.
Valabhī, 168, 201, 204, 205, 208, 211, 230, 250.
valli, 175.
vāmī, 173.
Vamsadi Gana, 75.
Vandals, 237.
Vanga, 120.
vānik, 223.
Vāniyambādi, 133n.
vāpī, 172.
varāha, 231, 233, 234.
Varāhadāsa I, 201, 105.
Varāhadāsa II, 201, 205.
Varāhamihira, 169, 174, 180.
Varāhavastani, 197.
varnas, 64, 250, 252.
varātaka, 234.
Varnavāta, 140.
Varuna, 46.
Varunasena, 209.
Vasantasena, 250.
Vasishtha, 86.
Vasishthiputra (Sri Plumāvi), 199.
vātals, 167.
Vātabhoga, 157.
Vatsa, 89, 120.
Vatsarāja, 195.
Vātsyāyana, 211.
Vavilov (N. S.), 16, 69, 244n.
Vedas, 164.
vedduvan, 121.
Vedisa, 128.
veli 240.
Vellālar, (*vellālan*) 97, 102, 121, 161.
Velūr, 197.
Veluvana, 102.
Vēmarāja, 197.
Venga, 220.
Vesāli, 96, 128.
Vidarbha (Berar), 83, 90, 97, 98.
Videha (North Bihār), 96, 128, 161.
vigrahapala-dramma, 233.
Vigraharāja, 195.
Vijaya, 70.
Vijayanti, 182.
Vikramāditya IV, 202.
vilkudi ulavar,
Vinaya, 102, 251.
Vindhyas, 67.

Vinītatunga (Sri), 205.
Vinukonda, 128.
vipani, 181.
Virāta, 104.
vriddhi, 135.
Virinda, 219.
Virupaksha, 219.
Visālpur, 81.
Vishnu, 123, 145, 153, 166.
Vishnuvardhāna, 230.
vishotsarga, 78.
vishti, 145, 146, 168, 211.
Visigoths, 236.
visvamatta, 88.
Visvavarman, 150, 204.
vitasti, 130.
vīvīta, 103, 141.
Vyāghrasena, 168.
vyala, 155.
Vyāsa, 187.

W

waraka, 130.
Warmington, 128.
Watt (George), 16.
Wells (H.G.), 246n.
Western Asia, 28, 80.
Western Chālukyas, 202, 203, 230.
Western Ghāts, 128.
Western Satraps, 189, 214.
Wheeler, (Dr. R.E.M.), 24, 28, 42, 81, 84, 245.
wootz, 84, 245.

X

Xerxes. 115.

Y

Yādava, 195, 241.
Yājnavalkya, 123, 151.
Yajurvēda, 76
yakshma, 78.
Yamuna (R.), 76.
Yangtze (R.), 16, 69, 92, 244.
Yasin, 185.
yava, 130.
Yavana/s, 132, 185, 187, 193.
Yavani, 187.
Yellow River, 91, 246.
yojana, 131.
yuka/s, 130.
yukta, 121.
Yunnan, 131, 185.
Yuri Gagarin, 244.

Z

Zābag, 228.
Zangian, 79, 83.
zinjabīl, 133.
Zawzanī, 219n.
Zeno, 184, 216.
Zeuner, 9.
Zhob, 18, 21, 83.
Zinjibar, 133.